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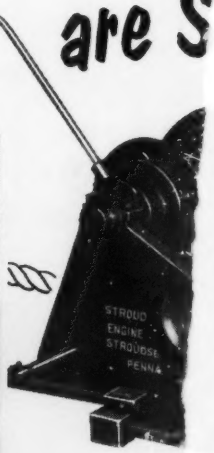
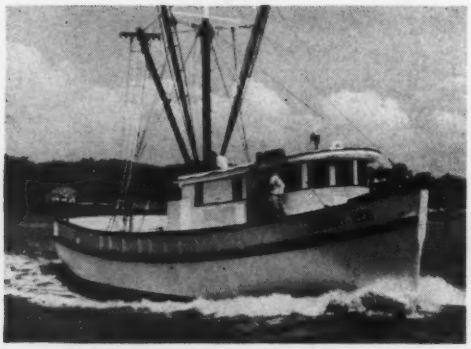
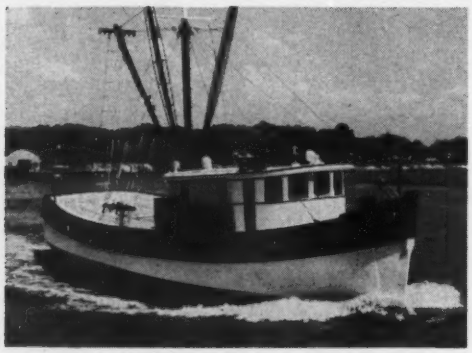




The "Johnny Reb," a 62-foot trawler owned by Charles Griffin, Jr. of Savannah, Ga., uses a 515-1/2T Triple Drum Stroudsburg Hoist.



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February 1959

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D. M. STRICKLAND
Managing Editor

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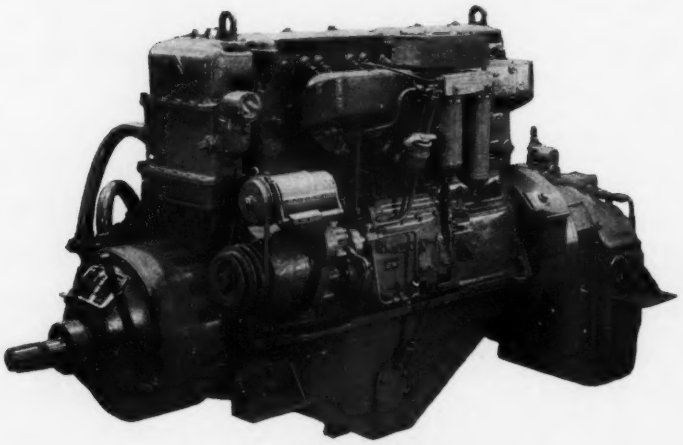

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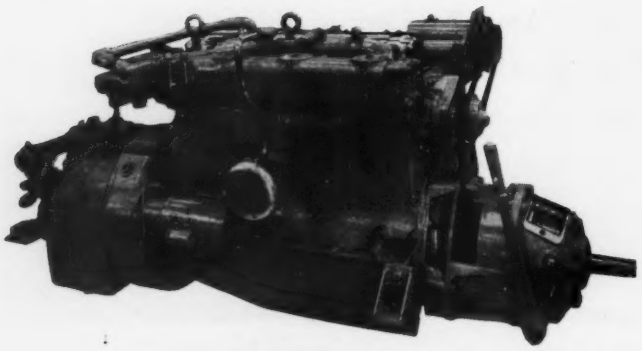

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FISHERY PROGRESS

► Rise in Price Index

During December 1958, mid-month wholesale prices for selected edible fishery products resumed their upward trend after a slight drop in the preceding month. Some sharp increases in fresh fish and more moderate increases in fresh and frozen shrimp prices were largely responsible for the rise.

The December edible fish and shellfish wholesale price index (134.8 percent of the 1947-49 average) was up 5.1 percent over the preceding month and 6.5 percent from December 1957, when prices were high.

► Vessel Mortgage Insurance

Regulations and procedures for a fishing-boat mortgage and loan program, designed to facilitate construction of modern fishing vessels were submitted recently by Secretary of the Interior Fred A. Seaton. The function was transferred from the Maritime Administration, Department of Commerce in April 1958, under the provisions of the Fish and Wildlife Act of 1956. When activated, the program will be operated by the Bureau of Commercial Fisheries.

Under this program the Government guarantees the repayment of mortgages and loans up to 75 percent of the cost of the vessel. For the guarantee, the vessel owner will pay the Government a premium of 1 percent annually on the amount due on mortgages and 1½ percent on loans.

A mortgage does not apply until the vessel has been constructed and registered. The term loan applies to the period before completion and registry. Mortgage will be limited to 15 years for a vessel. The vessel owner will protect his investment against insurable losses through private companies.

► Extension of Mesh Regulations

Regulations fixing a minimum mesh-size for the haddock and cod fisheries in the Northwest Atlantic will be extended on March 1, to cover additional areas, the Department of the Interior announced recently.

Present mesh-size regulations provide for a 4½ inch minimum in subarea 5, which includes Georges Banks south and east of Cape Cod. On and after March 1, the 4½ inch minimum will apply to subarea 4, the Gulf of St. Lawrence and nearby waters. A 4 inch minimum will apply in sub-area 3 which includes the Grand Banks off the coast of Newfoundland.

The regulations have been recommended after research by the International Commission for the Northwest Atlantic Fisheries. The research is to devise ways to conserve the fishing resource by preventing the loss of young haddock and cod and to determine the optimum size for harvest.

► Japanese-Russian Relations

Japanese-Soviet relations remained unchanged after the president of the Hakkaido Fisheries Public Relation Corporation went to Moscow recently, to discuss his plan to use Japanese fishermen in a joint salmon fishing venture in Soviet waters. Though he had little encouragement for his project, he told of Russian comments on their fishing relations.

Japan has more salmon fishermen than the present mothership fleet can use. The latest plan calls for the utilization of unexploited resources and relief of depressed Hakkaido fishermen by a joint Japanese-Soviet fishing of coastal waters now closed to Japan under the present treaty. Salmon produced by the operation would be sold to the Soviet Union.

Upon his return he reported that he was unable to see the Soviet fisheries chief, but had presented his case to a Commissioner on the Japanese-Soviet fisheries commission.

The Russian remarked that conditions had changed since the plan was first presented in 1957. This was taken to mean that due to improved economic conditions in the Soviet Union, the Russians no longer feel any need for Japanese cooperation.

► Fisheries Loan Fund

As of December 31, 1958, a total of 514 applications for fisheries loans totaling $17,780,883 had been received. Of these 278 ($7,176,756) have been approved, 169, ($4,987,-770) have been declined, and 38 ($1,634,126) have been withdrawn. Twenty-nine ($3,058,761) are pending.

Loans approved between October 20 and December 31, 1958 totaled: New England and Middle Atlantic area $156,559; South Atlantic and Gulf area $16,940; Pacific Coast $63,-100; for a complete figure of $236,599.

► Warns Against Obsolete Charts

The Director of the Coast and Geodetic Survey, Department of Commerce has cautioned against the practice of using out-of-date charts since constant changes in landmarks, aids to navigation, and submerged obstructions necessitate frequent revisions and corrections on newer charts make the others obsolete and hazardous to use.

The Coast and Geodetic Survey publishes 814 nautical charts covering the U. S. and its possessions. In an attempt to keep up with the constant changes, the Survey made more than 8 million hand corrections last year. When more than 40 hand corrections are made on a chart, a new print is issued.

► 1958 Fish Value Record

The value of the 1958 catch as estimated now is $380,000,000 or $11 million more than the record set in 1956. The preliminary data also indicated that the pack of fishery products canned for human food in 1958, totaled 740 million, an increase of 90 million pounds over 1957.

While the American commercial fish catch for the year was 4.626 billion pounds, or 152 million pounds below that of 1957, the fishermen received about $29 million more dollars for their catch than in 1957, according to data recently released by the Department of the Interior.

► New Fisheries Legislation

A bill to provide that certain surplus fishery products may be exported under the Agricultural Trade Development and Assistance Act of 1954 has been introduced by Senators Magnuson and Jackson.

Congressman O'Neil introduced in the House during January, a bill to provide a 5-year program of assistance to enable depressed segments of the fishing industry to regain favorable economic status.

Senator Magnuson and Congressman Rivers of Alaska presented bills in the House and Senate which would facilitate the application and operation of the Fish and Wildlife Act of 1956. The bills, similar to that introduced in the House by Pelly, would prohibit the import of salmon products derived from fish caught by nationals of any country that permits fishing for salmon by gill nets on the high seas and places where large quantities of immature salmon of North American origin occur.

► To Study Purchasing Patterns

Inauguration of a marketing study designed to point up consumer purchasing patters for canned tuna, salmon, and sardines has been announced by the Department of the Interior.

Data will be gathered on a nationwide basis for a period of a year. Results will be made available monthly to the fishing industry. The monthly releases will be followed by an annual report continuing a summation of the monthly findings.

The report will also contain data relative to market concentration, purchases in relation to size of family, income, age and employment status of the housewife, etc.

The data will be based on weekly diaries of 6,000 families which will record their purchases of a selected list of products. The monthly reports will show the number of standard cases of each type, the number and percentage of families buying each type, the average purchase, etc.

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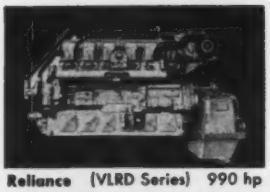
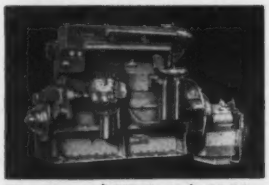
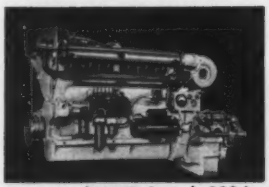


Reliance (VLRD Series) 990 hp

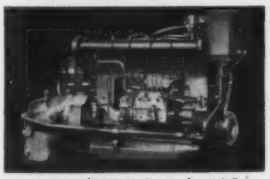
Defender (LRD Series) 510 hp



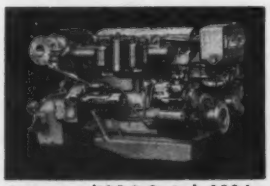
Wanderer (NKD Series) 315 hp



Resolute (WAKD Series) 290 hp

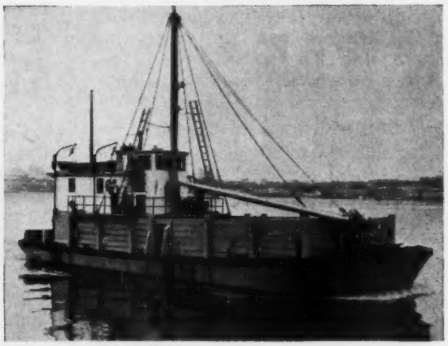


Vigilant (148-D Series) 195 hp

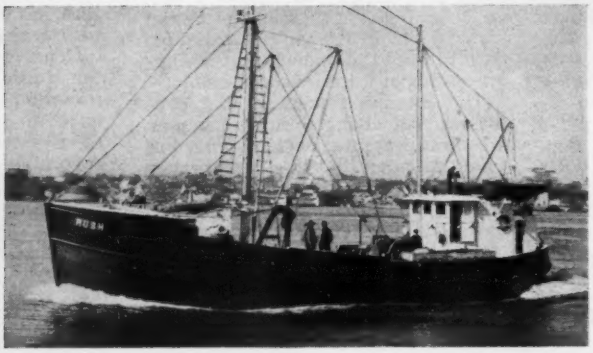


Cutwater (135-D Series) 120 hp

CAPTAIN DEEBOLD—65-ft. dragger. Powered by Waukesha "RESOLUTE." Installation by Hathaway Machinery Co., Inc., Fairhaven, Mass.



VIEKODA—72-ft. twin screw tender. Powered by two Waukesha "VIGILANTS." Installation by Piston Service, Inc., Seattle, Wash.



RUSH—73-ft. dragger. Powered by Waukesha "DEFENDER." Installation by Hathaway Machinery Co., Inc., Fairhaven, Mass.

NORTH SEA—72-ft. dragger. Powered by Waukesha turbocharged "RESOLUTE." Installation by Hathaway Machinery Co., Inc., Fairhaven, Mass.

411

BENSON H. RIGGIN—91-ft. Menhaden seiner. Powered by Waukesha "DEFENDER." Installation by Quinn Fisheries, Port Arthur, Texas.

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RELIANCE	Normal	12	8½ x 8½	5788	665 horsepower @ 1215 rpm
	Turbo	12	8½ x 8½	5788	990 horsepower @ 1215 rpm
DEFENDER	Normal	6	8½ x 8½	2894	335 horsepower @ 1215 rpm
	Turbo	6	8½ x 8½	2894	510 horsepower @ 1215 rpm
WANDERER	Normal	6	7 x 8¼	1905	240 horsepower @ 1215 rpm
	Turbo	6	7 x 8¼	1905	315 horsepower @ 1215 rpm
RESOLUTE	Normal	6	6¼ x 6½	1197	195 horsepower @ 1600 rpm
	Turbo	6	6¼ x 6½	1197	290 horsepower @ 1600 rpm
VIGILANT	Normal	6	5¼ x 6	779	150 horsepower @ 1800 rpm
	Turbo	6	5¼ x 6	779	195 horsepower @ 1800 rpm
CUTWATER	Normal	6	4¼ x 5	426	100 horsepower @ 2000 rpm
	Turbo	6	4¼ x 5	426	120 horsepower @ 2000 rpm

Aerial view of Bears Bluff Laboratories on Wadmalaw Island, S. C. showing some of the experimental ponds and research boats used by the staff under the supervision of Dr. G. Robert Lunz.

Shrimp Cultivation Studies at Bears Bluff Indicate Economy of Full Scale Pond Farms

Cultivation of marine organisms in salt water ponds has been practiced in the Orient for five centuries or more, and while growing shrimp in such ponds is common practice in these countries, it has not been worked out commercially in the United States. There are ample tidal marshes along the South Atlantic and Gulf Coasts where shrimp ponds could be built, and the possibility of their cultivation is intriguing. The question is whether or not pond cultivation is economically feasible, or able to compete with trawling.

Comparative Pond and Trawler Costs

Detailed cost analyses of shrimp production through pond cultivation, as against production by a trawler, are not available, but some generalities give an interesting picture. The modern, seagoing shrimp trawler costs between $20,000 and $40,000. Shrimp ponds can be built for a cost of $250 to $600 an acre. The cost of maintaining a shrimp trawler is considerable, whereas the maintenance expense of established salt water ponds has proved negligible. The actual operating costs of a shrimp farm are unknown, but considering the outlay for trawler operation (crew's share, fuel, nets, gear, etc.), it appears unlikely a shrimp farmer would be reduced to penny-pinching.

The second question which arises asks whether the acreage of shrimp ponds, which may be built for the same cost as a trawler, can produce annually the 20,000 to 50,000 pounds of shrimp caught by the trawler. So far as is known, no commercial shrimp farming has been tried in the United States and, therefore, commercial production figures are not available. Reports coming out of India, however, indicate that 350 to 1,000 pounds of shrimp are produced per acre of pond during a five month season. Calculating from these general figures, if the marsh lands of the United States could produce shrimp at the same rate, the equivalent cost of a shrimp boat would yield annually between 12,000 and 160,000 pounds of shrimp.

For the past ten years Bears Bluff Laboratories has been experimenting with the growing of shrimp in salt water ponds in the marshes of South Carolina. The records of these experiments give some clue as to the feasibility of shrimp cultivation in this country. Actually, the shrimp production at Bears Bluff has been a pasturing and fattening of stocked shrimp, rather than the raising of shrimp from brood stock. There is no evidence from the work to indicate that shrimp have ever spawned in the ponds.

The experiments have been conducted in five salt water ponds ranging in size from a tenth of an acre to slightly more than one acre. Three of the ponds are built in the tidal marshes, two in the high land. The high land ponds are filled from a nearby creek with irrigation pumps, while the tidal ponds are filled through flood gates. All are relatively shallow, about three feet deep.

Apparently these ponds are suitable habitat for marine organisms. One of the one-acre ponds yielded a harvest of 408 pounds of fishes, crabs, and shrimp in an eight month period. Another acre pond yielded an average of 250 pounds of marketable fish a year, over a five year period. Oysters have been grown satisfactorily and abundantly in one of the ponds.

Just how many shrimp can live in an acre pond is of great importance, but the data available are far from complete or satisfactory. In one, still continuing experiment, there were approximately 30,000 small shrimp 2.5 to 3 inches long stocked to an acre of surface area, with an average depth of 2.5 feet, or 30,000 shrimp to about 110,000 cubic feet of water. While the small holding ponds for the bait-shrimp industry temporarily often contain much larger numbers, the actual holding capacity of a shrimp farm pond has not been worked out.

In tidal ponds where water is flowed in through a flood gate, predacious fishes such as spot, croaker, black drum, and winter trout are apt to enter. The larger size of such predators can be kept out of the pond by screening the intake with quarter-inch mesh hardware cloth. The normal growth of shrimp is faster than that of predacious fishes, so that those which are able to enter the pond through the screen ordinarily do not grow sufficiently to consume any quantity of shrimp before harvesting.

A few experimental plantings of shrimp in ponds have indicated the effect of predators. In one, where there were 600 or more predacious fishes in the pond, the mortality of the shrimp exceed 93 percent. Another in which 9,000 small predacious fishes were present, showed that 87.8 percent of the shrimp stock was not recovered. A paired experiment showed that a pond, from which

(Continued on page 27)

California Trawling Gear

Pacific Coast trawl net history one of change, experiment, and improvement

A trawl is simply a drag net, its name derived from the manner of operation rather than from any peculiarity of the net itself. It is a large bag net, tapering aft from the mouth, forming a flattened cone, with some device to keep the mouth open while it is dragged along the ocean bottom.

The operation of trawls for catching demersel fishes at some distance from shore, in moderately deep water, has shown itself to be very efficient and comparatively low in operating costs. Dragging such a net is known as trawling and the men and boats that trawl are called trawlers.

Although trawling originated so long ago that its beginning is lost in antiquity, it is reasonable to suppose, that this type of fishing developed late in comparison to other types of fishing with nets known to have very ancient origins. It is possible that a movable brush weir suggested the beach seine, which in turn may have hinted at the trawl.

A short beach seine with a horizontal pole spreader was used in ancient times, and still is used along parts of the Atlantic Coast as a crab drag. But, it is not, strictly speaking, a trawl or bag net. The addition of a deep bunt to such a seine may have suggested a tapering bag and the pole spreader mav have become the beam. Some such arrangement of beam and bag net was used in England as early as 1376.

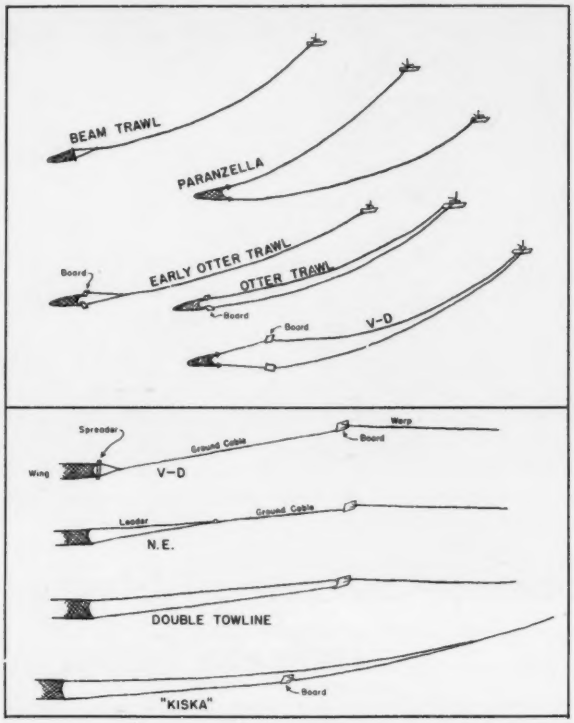
Early attempts to drag a net in deep water employed a square or oblong frame of poles to which the net was lashed, and rocks were attached to keep it on the sea floor. This system is still employed, especially for shellfish, but the modern frame is of metal and the gear is called a dredge. The bag net of a dredge seldom tapers aft and necessarily is of small size, since dragging a large metal frame would require too much power. Ordinarily the dredge, because of its limited size and shape of net, is not classified as a trawl.

The Three Basic Trawl Types

There are many variations of construction, but only three basic types of trawl nets, each determined by the device employed to keep the mouth of the bag open. The simplest type is a net attached to a rigid horizontal pole or beam and known as a beam trawl.

Excerpted from material by W. L. Scofield, California Dept. of Natural Resoruces.

"Memories", 65' otter trawler is powered by 135 hp. Atlas engine with 3:1 Twin Disc reduction gear. Owned by Ralph S. Mason, Freshwater, Cal., the boat has an Edo Fishscope and is finished with Pettit paint.



Upper half of illustration shows several forms of trawl nets while the lower half indicates four methods of placing the otter board in advance of the net wing.

Another makes use of towing lines, each drawn by a separate vessel. The tow vessels follow parallel courses, but at a sufficient distance apart that the diverging towlines pull outward and keep the net mouth spread open. This type of trawl is generally known by the Italian name, paranzella.

The third accomplishes the outward pull of the net mouth by a pair of kite-like boards called doors, sheer boards, otter boards, or simply boards, hung from four bridle lines, chains, or rods, at each side of the net. The forward lines are shorter, so that the boards are at an angle to the water pressure when they move forward, thus causing them to veer off to one side, diverge, kite out or spread, keeping the mouth of the net open. This type of net is called the otter trawl.

The Beam Trawl is Limited in Height

The beam trawl has each side of the bag mouth attached to a metal frame (trawler head) three or four feet high, mounted on a sled runner or shoe. The two frames are held rigidly apart by a heavy horizontal spar or beam to which the upper portion of the bag mouth or head rope is lashed. Thus the height of the bag mouth is limited to the trawler heads which support the beam.

The fishing width is limited by the length of the beam, normally about 50 feet, while the length of the net is roughly twice that of the beam. The foot rope has slack, curving aft a distance about equal to the length of the beam. Formerly called the bosom and now known as the overhang, this distance is that by which the head rope leads the foot rope.

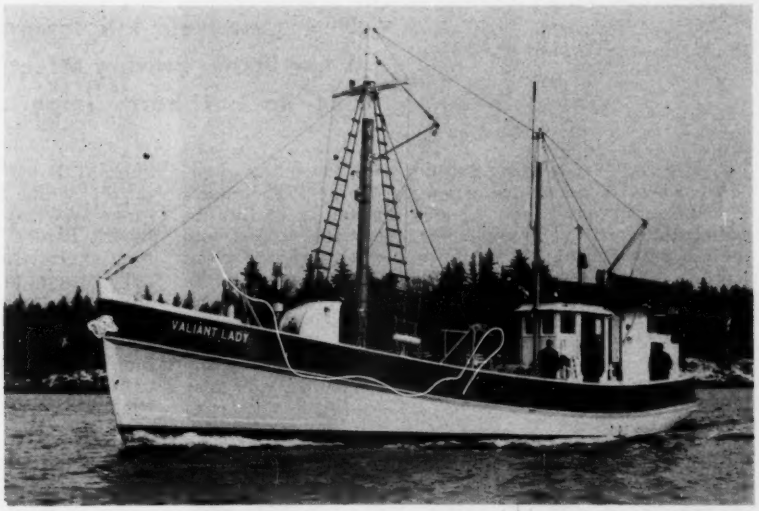
Such an overhang is characteristic in all types of trawls except the dredge. To permit a deep curve of the foot rope, the lower portion or belly of the net is cut away before the meshes are attached to the foot rope, while the upper portion or back or square, is lashed directly to the beam.

The portion of the net aft of the square, where the bag tapers sharply, was often called the batings, a name

(Continued on page 33)

"Valiant Lady" Joins New Bedford Dragger Fleet

Captain Antonio Vasques, owner of "Valiant Lady."



New 71' dragger "Valiant Lady" built by Harvey F. Gamage, So. Bristol, Me. for Capt. Antonio Vasques of New Bedford, Mass.

ANOTHER new Gamage-built vessel joined the New Bedford, Mass. fleet last month. She is the 71-foot ground-fisherman *Valiant Lady*, owned by Capt. and Mrs. Antonio R. Vasques of Fairhaven, Mass.

From the yard of Harvey F. Gamage, Shipbuilder, South Bristol, Maine, the new dragger was constructed from the *Catherine & Mary* model, designed by Eldredge-McInnis, Inc of Boston, Mass. She has a beam of 17'4" and draft of 8'5". Keel, frame and planking are oak, decking is pine, and galvanized fastenings were used.

Propulsion power for the new craft is a 6-110 General Motors Diesel, sold by Hubbs Engine Co. The engine is rated 220 hp. at 1800 rpm., has 4.5:1 reduction gear and 3:1 power take-off, and swings a Columbian 5-blade, 50 x 36 propeller on a 4" Tobin Bronze shaft with Goodrich Cutless rubber stern bearing. A 5 kw. Kurz & Root generator and two Jabsco pumps for bilge and deck service are driven off the main engine.

An air-cooled, 2 cylinder, Model LE2, 8½ hp., 1800 rpm. Lister Diesel provides power for the auxiliary unit, driving a 5 kw. Kurz & Root generator, Marine Products pump and a bronze winch head on the deck side of the engine trunk for taking out fish.

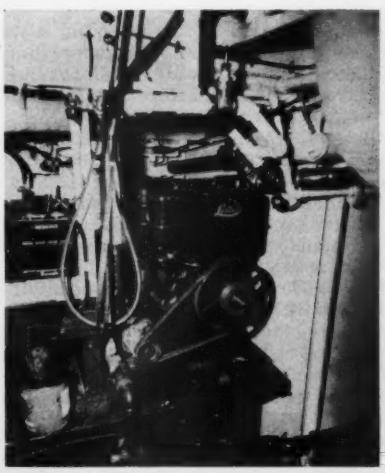
The *Valiant Lady* has a 32-volt electrical system, with heavy duty GTNS-33 Surrette batteries and Model S150E "Safety" carbon pile voltage regulator.

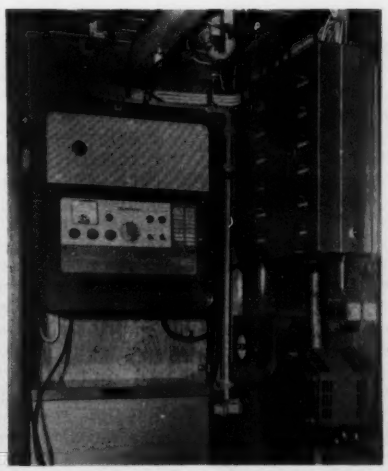
Marine Radio & Electric Co., Inc., Fairhaven, Mass. furnished the vessel's full complement of electronic equipment. She has Bendix DR-12 depth recorder, 10" Bat Lavoie radar, Model AE76DM, 150-watt input Apelco radio-telephone, two APN-9 Lorans, and Hallicrafters receiving set.

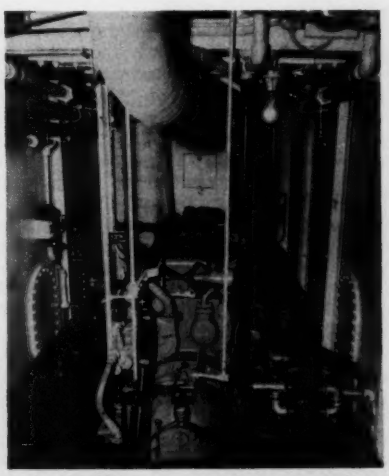
Quarters are provided for 6 men in the fo'c's'le and 2 in the after cabin, while Captain's stateroom is aft of the wheel house. The galley, located forward, has a #10160 Shipmate oil-burning range and stainless steel sink with hand pump. Two galvanized fresh water tanks carry 400 gallons, and a No. 30 Shipmate hot water boiler provides heat for the after section of the vessel.

Deck equipment was built by Hathaway Machinery Co. and includes a Model 1353 trawl winch with 16" drums. Four welded steel fuel tanks provide 2500-gallon capacity.

Gamage has two other fishing vessels under construction for New Bedford. An 80' scalloper for Capt. Nils Risdal will have a D375, 300 hp. Caterpillar Diesel, sold by Perkins Machinery Co.; and a 70' dragger for Aadland Fishing Corp. will be powered with a Model WAKD, 160 hp. Waukesha Diesel.







Aboard the "Valiant Lady": left, Lister air-cooled auxiliary Diesel and Surrette batteries; Center, Apelco 150-watt radiotelephone and light switch panel; right, General Motors 6-110 Diesel, sold by Hubbs Engine Co.

Lamprey Losing Great Lakes Battle

New chemicals kill lamprey larvae as well as adults in a few hours. Proving effective in clearing Lakes of menace, and do not harm important commercial fish resources.

A late June report gave account of a powerful chemical that killed all sea lampreys in upper Michigan's Mosquito River in six hours, one fourth of the expected time. The yellow chemical had been poured into the river by Fish and Wildlife personnel. Original plans were to treat the stream for twenty four hours, according to Dr. Vernon C. Applegate of the U. S. Fish and Wildlife service, but the stop was called after only six hours, as all the lampreys were dead.

A relative new comer to the upper Great Lakes, the lamprey has been a longtime resident of the St. Lawrence River and Lake Ontario. Niagara Falls blocked its path until 1892, when the Welland Canal by-passed the blockade. Lampreys were not reported in Lake Erie until 1921, though they did not flourish there as the water was too warm for spawning conditions.

By 1930, the lamprey had found its way into Lake Huron and Lake Michigan to begin its pattern of fishery depletion, and an industry, with a dollar volume in the millions, that produced a food product of importance to national economy, began to falter. More recently, the last stronghold of the lake trout, Lake Superior, was invaded.

From the first, the U. S. Fish and Wildlife Service and the conservation departments of the Great Lakes and Canada initiated programs to control the pest. In 1946 the U. S. and Canada initiated a co-operative program which was formalized in 1954 and continued as the Great Lakes Fishery Commission, after 1956. The leading figure in the campaign was Dr. Applegate.

In 1950 a laboratory was set up in an abandoned Coast Guard station at Hammond Bay on Lake Huron near Rogers City, Michigan. The first problem was to decide at which stage of its life the lamprey was most vulnerable. At first the program was directed toward immediate results while researching the problem from the long range view. Applegate and his associates developed electro-mechanical weirs which proved to be practical barriers against spawning migrants.

The weir program was expanded and concentrated along the Lake Superior water shed in hopes of saving the lake trout population, as that was the stock from which the lower lakes could rehabilitate. Attention was then directed toward the possibility of a chemical control.

An official report by Applegate summarized the problem. "The sea lamprey program, based on the pervention of spawning, will not show results for seven or more years. At least six generations of larvae, spawned previous to the blockade . . . must grow, transform, migrate to the lakes, and prey on fish before the blockade is effective."

The first step in the search for a selective toxicant was an extensive screening program of chemicals which might do the job. Nearly 4,000 were chemicals originally assembled for use in another Fish and Wildlife investigation. Universities, industries, and individuals submitted samples, swelling the total to nearly 6,000. Nearly 40,000 fish were delivered over a two year period.

Two years passed and 3,000 chemicals were tested, with failure the only reward. Fish and Wildlife laboratory director, John Howell, made the first recording that gave substance to the dream of selective chemical control of lampreys. Howell found, in one experimental tank, that the larval lampreys were dead and the trout were very much alive. The compound was a halogenated nitrophenol.

The next step was research into the nature of the compound itself. The results were not encouraging. They showed it was almost impossible to synthesize with the

(Continued on page 36)

Left to right; Leo Erkkila, supervisor of sea lamprey control F&WS pointing out dead lamprey larvae to Al McLain and Robert Braem, F&WS biologists. During a stream trial all caged lamprey were checked periodically and time of death and distress symptoms were recorded.

Dr. James W. Moffett, left, chief of the Great Lakes Fishery Investigations of the F&WS; Dr. Vernon C. Applegate, director of the Hammond Bay Station; and W. Fenton Carbine, right, regional director Bureau of Commercial Fisheries, Ann Arbor, Mich. examine a cage in which live lamprey larvae were placed for observation.

Abstracted from report by Edward J. McVeigh, Dow Chemical Co., Midland, Mich.

Maryland Crabmeat Conference Held at Crisfield

An investigation of the cooking, handling and distributing problems confronting processors of crab meat was carried out at a "Crab-Meat Conference" held at the Seafood Processing Laboratory in Crisfield last month.

The conference included a series of demonstrations on processing crab meat and methods for testing the physical and bacteriological quality of the meat.

Among those present were members of the U. S. Bureau of Commercial Fisheries, members of the National Fisheries Institute, and of the State Department of Health, as well as a number of packers from the East Coast and Gulf states, where blue crab meat is packed.

Dr. David Ulmer, research associate in charge of the seafood laboratory took the group on an inspection tour of the local processing laboratory and following that a series of demonstrations, conducted by personnel of the laboratory, afforded many packers an opportunity of seeing for the first time methods employed by the laboratory for testing crab meat.

Dr. G. W. Wharton, head of the Department of Zoology of the University of Maryland gave a review of the work done on the crab industry with Saltonstall-Kennedy funds under contract with the U. S. Bureau of Fisheries. His review included such subjects as cooking of crabs, handling of crabs after cooking, costs and bacteriological problems.

Attending the conference from the Bureau of Commercial Fisheries were Harold Crowther, chief, and Dr. Harold Allen of the Division of Industrial Research and Service, Washington, D. C.; Frank T. Piskur, chief and Charles Lee and Mrs. Mary Ambrose of the Bureau's Technological Laboratory, College Park, Md.; Harris Magnusson, of the National Fisheries Institute; C. S. Brinsfield, chief, Division of Food Control, and Frank Hobbs of the Maryland Department of Health.

Representing the blue crab committee of the NFI were the following crab meat packers; John Shaw, South Atlantic Crab Co., Jacksonville, Fla.; E. W. Lewis, Lewis Crab Factory, Brunswick, Ga.; Theodore Jones, Belhaven Fish & Oyster Co., Belhaven, N. C.; J. H. Richardson, Martin & Richardson Seafood Co., Newport News, Va.; Ivy Todd, The Todd Co., Cambridge, Md.; J. Loren Sterling, Milbourne Oyster Co. and I. T. Todd, Jr. of the Metompkin Bay Oyster Co., Crisfield.

New Seafood Group Elects Officers

Jeremiah Valliant, Mayor of Salisbury, Md. was elected the first president of the Chesapeake Bay Seafood Survey Committee, an organization designed to conduct factfinding surveys and investigate all phases of the Maryland seafood industry.

Other officers elected include Ivy Todd, Jr. of Cambridge, vice-president; Walter D. Webster of Salisbury, secretary; George Staples of Crisfield, technical advisor and K. Thomas Evergam of Denton, legal counsel.

During the meeting several members of the committee reported on a recent biological institute conducted on the oyster industry at the University of Maryland. Results of this meeting were to be compiled into a booklet soon to be published.

The Committee unanimously adopted a resolution to Gov. Tawes suggesting he consider reorganizing the Tidewater Fisheries Department to have a single professionally qualified director to be helped by an Industry Advisory Committee, with representatives from all segments of the industry.

At the first meeting of the Seafood Survey Committee held in Cambridge late last month, three watermen were appointed to head the executive committee of Dorchester County-Capt. Arlie Baker, Hensel Geoghegon of Cambridge and Monroe Todd of Crocheron.

"CUMBERLAND" operated off St. Mary's Ga., by the Camden Seafood Co. is powered with an 8V-71, one of General Motors new V-71 engines designed for the fishing industry.

Maryland Tongers Making Good Money

A noticeable change has taken place in the oyster catching industry in the Crisfield section this season. Heretofore, dredgers and tongers were in different categories with dredgers frequently being the higher money makers. This season, however, many tongers are reported to have been making much more money than the dredgers.

Holland Straits is reported to have been good for the tongers this season with earnings of $100 or more weekly. There has been fairly good supply of shell stock oysters in that section. They are of fair quality and the price received by the tongers has been high throughout the season.

Maryland Senators Oppose River Treaty

On January 22 Tidewater senators launched formidable opposition to the proposed Potomac River treaty with Virginia, and it is thought that the new compact is going to have to undergo a little revamping to win the approval of Gov. J. Millard Tawes.

Tawes reported that he approved in principle the proposals for a bi-state agency to regulate fishing on the river under present Maryland laws, but he said there are some features that will require further study.

Oysters may be taken from the Potomac at present only by hand-operated tongs, and it is the plan of the chairman of the Somerset County delegation to push in the Maryland legislature a bill that would permit use of patent tongs to catch oysters in the river.

Virginia Blue Crabs Abundant

Crab dredge boats working in lower Chesapeake Bay have been catching their limit of 30 barrels per boat per day. This substantiates the prediction made in the fall by Willard A. Van Engel that crabs would be abundant this winter. His prediction stated that crabs would be abundant and should continue to be plentiful in the spring and early summer.

Starfish Controls, Imports, Pond Farms Discussed at Oyster Institute Meeting

The mid-winter meeting of the Board of Directors of the Oyster Institute of North America held in New York January 19 was presided over by president Tom McGinnes, Va., who was assisted by vice-president William R. Woodfield, Md.; and A. J. MacTaggart, N. Y.; plus secretary-treasurer, David H. Wallace.

The problem of how to meet the continued rise of foreign imports of shellfish was discussed. It was agreed that the Institute would take steps within its power to encourage passage of legislation requiring minimum sanitary specifications to be established by the Surgeon General for all foreign imports equal to minimums required of the U. S. shellfish industry.

Legislation for this purpose was introduced by several Senators in the last Congress, but was not heard because it was so late in the session. A new bill has already been introduced by Congressman William M. Colmer of Miss. Other Congressmen have expressed their desire to introduce identical legislation. A companion bill will also be introduced in the Senate shortly.

A resolution was adopted by the Board that the Institute seek aid from New York, Connecticut, and the Federal Government to carry on research of new and improved methods of starfish control, eradication work, and the evaluation thereof. Wayne Heydecker, secretary-treasurer of the Atlantic States Fisheries Commission, had previously arranged a meeting with the commissioners of the two states. Representatives of the states after hearing an analysis of the problems, pledged action by their states.

As a follow up to the pledge, Frank Flower, Heydecker, and David Wallace went to Albany, N Y. at the direction of State Senator Jim Barrett of New York, where a conference was held with the deputy conservation commissioner, Victor Skiff, and Budget Bureau authorities. Reports of the meeting were very satisfactory. At the same time Lyle Thorpe, director of Conservation of Connecticut reported that enabling legislation has been introduced in the Connecticut Legislature.

Congress S. Wainwright of New York has reintroduced a bill which would permit federal aid in bringing about starfish control.

The Institute has carried on research on the use of salt water ponds for setting oysters under a contract with the Federal Government, in conjunction with the U. S. Fisheries Laboratory at Milford, Conn., from June 1955 to June 1958. Since it is felt that this work should be continued, the Board requested the regional director of the Bureau of Commercial Fisheries for another contract beginning as soon as possible.

The Board after hearing a comprehensive discussion of the Federal-State-Industry shellfish sanitation program which has been functioning well since 1927, went on record strongly urging Congress to make sufficient funds available to the Public Health Service so that the Public Health staff can perform their functions in the joint project.

It was pointed out that the Federal part of the program actually had less funds to carry out their functions than 5 years ago.

Immediate past president, William P. Ballard, Va., and past president J. R. Nelson, Conn., were in attendance. Other directors present were: James McPhillips, Ala.; Louis Radel, Conn.; Walter J. Lehman and Roy Hand, Del.; G. I. R. Lore, Md.; Norman L. Jefferies and Lemuel B. Newcomb, N. J.; George Vanderborgh, Sr. and Butler Flower, N. Y.; R. H. Mears and Frank M. Miles, Va. Fred Johnson, chairman of the Government Relations Committee and Cranston Morgan, chairman of the Standards Committee were also present.

Menhaden Producers Hold Convention

Atlantic and Gulf states menhaden producers held their annual convention February 1-3 at Old Point Comfort, Va. About 250-300 processors, captains and suppliers were in attendance at the three-day session which was highlighted by an address by Ross Leffler, assistant secretary for the Department of the Interior.

Included in the program was a panel discussion pertaining to boat owner problems. Representatives of the Bureau of Commercial Fisheries put on a one-day session to discuss biological and technological phases of the menhaden fisheries.

Charles E. Jackson of the National Fisheries Institute and Howard O. Sturgis, director of Industrial products division gave reports on "Pending Legislation Before Congress".

D. L. McKernan, director, Bureau of Commercial Fisheries, spoke on "The Menhaden Industry and the United States Bureau of Commercial Fisheries". Other speakers were: Dr. J. L. McHugh, chief, Division of Biological Research; Stewart Springer, chief, branch of exploratory fishing and gear research; J. A. Holston, chief, branch of technology; and H. E. Crowther, chief, Division of Industrial Research and Services.

New Virginia Shellfish Investigator

Dr. Morris L. Brehmer, a recent graduate of Michigan State University took up his duties as shellfish investigator at the Virginia Fisheries Laboratory last month.

The position was established to investigate basic problems related to the effects of pollution on Virginia's marine resources.

Brehmer has been employed by the Institute for Fisheries Research, Ann Arbor, Mich., and the Illinois Department of Conservation, Division of Fisheries, Springfield, Ill.

Seafood Outlook Good for 1959

The seafood industry generally presents a bright picture in Virginia this year. Oysters are in such demand that every dealer declares he cannot produce enough. One reason is that quite often there are not enough shuckers available although expert shuckers can make as high as $17 a day. But dealers say there are not enough expert shuckers. Another reason is the prolonged, extremely cold, often windy weather that has prevailed since before the middle of December.

The strike of the Chesapeake Bay independent crab boats beginning the last week of 1958 ended January 2 upon the processors promising to pay 5 cents per pound and 6 cents when the crabs are hauled from a distance. Late in January most of the boats were catching their limit of 30 barrels, and crabs were fairly plentiful.

Virginia Fishery Training Started

Carteret County's first course in fisheries training for adults began this month at Atlantic. The teachers are Clayton Fulcher, Jr. of Atlantic and J. W. Johnson, principal of Atlantic school. The first course offered will be navigation.

Other courses which can be offered if there is sufficient interest, are engine maintenance and care of electronic instruments, such as fathometers. The course consists of 40 hours and will run for 20 weeks.

Dr. A. F. Chestnut, chairman of the county committee for fisheries vocational education training, stated that fisheries vocational courses are now being taught in Texas, Oregon and Louisiana and have been well received by the fishermen. He is confident that the courses will be beneficial to Carteret fishermen and the fishing industry.

Virginia Scientists Seek Improved Oyster Standards

Facilities and work space were being provided last month at the Virginia Fisheries Laboratory, Gloucester Point, for a team of scientists to investigate quality standards for oyster marketing. Richard Edge of the Food and Drug Adminstration and Arnold Tubman of the Fish & Wildlife Service have been doing preliminary investigations during the past month and will soon be joined by a scientist supplied by the Oyster Institute of North America. Dr. Benjamin Willier of Johns Hopkins University is directing the work.

Data acquired through this study will be used as a basis to improve packing and marketing practices and to evaluate present standards of quality. The necessity for such a study became evident as a result of court cases concerning the amount of solids in a given unit of oysters.

The scientists will also make an active study in nearby shucking houses on the effect of processing variables on the composition and characteriestics of packed oysters.

States Position on James River Dredging

Governor Almond last month wrote the U. S. Army Engineers declining any official declaration of state policy on the $35 million job of deepening the James River. The State Fisheries Commission has opposed the plan because it may be harmful to seed oyster beds in the lower James, and under legislation enacted by the last Virginia General Assembly, the Commission can block dredging of the channel.

Record Menhaden Catch for N. C.

Beaufort, N. C. Fisheries last month accounted for a record catch of 11½ million menhaden in eight fishing days according to William H. Potter, general manager.

A few of the fish were roe fish, another oddity for January when all other menhaden factories close down and transfer their operations to the Gulf of Mexico.

Wesley Willis, manager of Standard Products Co. of Beaufort reported recently that the past season was as good as any of the three seasons they have been in operation. The firm caught a third more fish this year than last. Willis announced that the company is studying plans to enlarge the present plant during the summer months.

The Fish Meal Co. of West Beaufort estimates that catches this winter were about 15 per cent above those of 1957. George Wallace, owner of Wallace Fisheries, Morehead City stated there were plenty of fish but that the weather didn't permit them to get as many as they could have under more favorable circumstances.

R. W. Taylor of R. W. Taylor Co. agreed that there were plenty of fish but that the weather was worse than average. However, his factory processed about the same number of fish as it did last season.

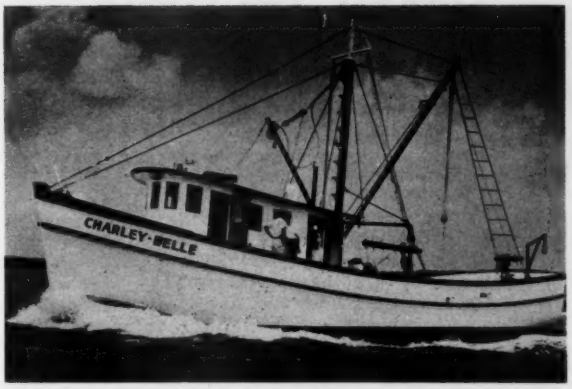
Jarvis to Enlarge Operations

Harry J. Jarvis, who came to Engelhard, N. C. to buy shrimp in 1945 today employs 150 to 200 workers in season, including his regular staff of 20, is now completing a new building for the processing of seafood, adding 5,500 more square feet to his plant on Fur Creek. Added to the capacity of the three other large buildings which have been built through the years, he will have some 13,000 feet of floor space.

He is now expecting to get into the clam chowder business. He plans to process seafood by a vacuum pack method whereby it may be frozen for two or three years.

Mr. Jarvis is a big handler of oysters and his seafood products run close to a million dollars annually, with about 50 per cent of them being marketed in the state.

Mr. Jarvis believes the greatest times the seafood industry will have in this state will be in the next five or ten years and he is getting ready for it.



"Charley-Belle", the boat owned by Clifton M. Goff and Benton Boggess of Everglades, Fla. was built by Morehead City (N.C.) Shipbuilding Corp. and powered by a General Motors 6-71 Diesel with 4.5:1 reduction gear turning a 44 x 36" Federal propeller on a 3" Tobin Bronze shaft. Electronics include Apelco 76CM radiophone, Metal Marine Model 11 automatic pilot, and Bendix DR-9 depth sounder. Stroudsburg hoist, Onan generator, Marine Products pump, Surrette batteries, Wickwire trawl cable and Danforth anchor are included in the other equipment.

Florida to Continue Shrimp Research

Two research projects aimed at the perpetuation of profitable shrimp fishing in the Tortugas area are being continued by the Department of the Interior, according to Ross Leffler, the Assistant Secretary.

Leffler said that the research is being continued through two projects, one directly by the Bureau and the other through contract with the University of Miami Marine Laboratory.

The Bureau staff is continuing a study of shrimp movements and growth using a new method of marking individual shrimp with vital dyes.

It is believed that the information produced by this research will contribute to a knowledge of Tortugas shrimp life history and will form a basis for studies on the optimum size at which to catch shrimp in order to obtain the greatest production.

This year's University of Mami program calls for a study of the hydrography of the Tortugas area in relation to inshore and offshore distribution of shrimp.

Tagged Shrimp Reward Increased

One hundred dollars in cash will be given away every six months by the Marine Laboratory of the University of Miami, Fla. for one recaptured tagged shrimp. This tag will be drawn from all the tags turned in during a six-month's period.

In addition, a one dollar reward instead of the former fifty cent reward will now be paid for every tagged shrimp turned in to shrimp dealers or Marine Laboratory representatives.

The first drawing will be held about May 1 and will include all the tags turned in between November 1, 1958 and April 31, 1959.

All requests for information relative to this matter should be sent to The Marine Laboratory, 1 Rickenbacker Causeway, Miami 49, Fla.

Florida Poisoning Rough Fish

The Florida Game and Fresh Water Fish Commission recently voted to undertake a sample poisoning program in Lake George and the St. Johns River in Putnam County. The commission last year did some seining in the two bodies of water at the request of the authorities to clear out the rough fish.

The new program is designed to determine whether seining or poison will be the most effective in a total program.

NORTH ATLANTIC

Maine Sardine Canners Seek Grading Program Expansion

Impressed with results obtained during the 1958 packing season, Maine sardine canners have asked Commissioner of Agriculture E. L. Newdick to expand their mandatory quality grading program.

If Newdick accepts the industry's recommendation, standard quarter size flat cans of sardines in mustard and 12 ounce cans in oil will be included in this activity for the 1959 pack.

The packers were congratulated recently by Newdick on their cooperation in making the first year of operation of the program such an outstanding success and he predicted that it would mean much to the economic advancement of the industry in the future.

According to Newdick, records of the inspection division which administers the program indicated that the overall quality of the 1958 pack of approximately 200,000,000 cans was the highest in the history of the industry.

Maine Seeks Fishery Marketing Act

A Maine fishery marketing act, with special safeguards for cooperatives, was advocated recently by Rep. John L. Knight of Rockland. Knight's measure would "spell out" each association's powers, establish guide lines for articles of incorporation and by-laws including provisions for boards of directors, certificates of membership and marketing contracts and agreements.

Portland Towboat Repowered

The 100 ft. Portland, Me. towboat owned by Portow, Inc. has been repowered by Hubbs Engine Co. with General Motors Model 122206 Tandem 6-110 Diesels, rated 440 hp. at 1800 rpm with 6:1 reduction.

Seek Additional Fisheries Funds

Maine Sea and Shore Fisheries Commissioner Ronald W. Green said recently that he is asking for additional funds to expand his department's education, promotion, marketing, enforcement and research activities.

He is asking for an annual appropriation of $7,786 to set up a permanent fisheries education program. This program would provide information on marketing conditions, fishing methods and the latest research findings which would be passed on to primary and secondary schools, and to the industry.

He also seeks to increase the present advertising, publicity and marketing programs in newspapers, magazines, radio, television and theatres and would help Maine seafoods meet the growing competition of imported fisheries products.

Green is asking for $50,000 each year for new marketing programs and he would also expand the Coastal Warden Service in order to give more complete coverage to coastal areas.

He is also asking an increase in funds which are provided for the seed lobster program for the purpose of purchasing seed lobsters and liberating them in coastal waters from Calais to Kittery.

Harbor Supply Distributor for Flagship

Harbor Supply Oil Co., Inc. of Portland, Me. has been made State of Maine distributor for Flagship V-8 marine engines, manufactured by Flagship Marine Engines, Inc., Lynch Cove, Baltimore 22, Md. Harbor Supply plans to set up several dealers for the Flagship line and already has appointed Hanna's Garage, New Harbor, and Blake's Marine, Boothbay Harbor.

Two of the heavy duty Flagship models suitable for fishing boats are the 150 hp., 3600 rpm. and the 220 hp., 4800 rpm. engines. Their bore and stroke are 3.875 x 3, displacement is 283 cu. in., and a four-barrel carburetor is used. They are available for manual or hydraulic direct drive and with 1.5:1 and 2:1 hydraulic reduction.

A special feature of the engines is the "Ram's Horn" manifold designed to give greater protection against submersion by keeping the exhaust outlets as high as possible. Raw sea water has to make two passes through the block, thus reducing sludge. Exhaust elbows may be positioned three ways to facilitate installation.

Lobster Transportation Bill

Sen. Margaret Chase Smith of Maine last month introduced a bill to regulate the interstate transportation of lobster. The legislation is in the form in which it had been favorably reported out by the Senate Interstate and Foreign Commerce Committee last year. The legislation provides that it is illegal to import whole cooked and whole live lobster smaller than 3-3/16 inches carapace measure, and defining "lobster" when used in the Act as the North American lobster.

Maine Fisheries Course Sought

Rep. Katherine I. Hendricks reported last month that she was drafting a bill to establish an all inclusive sea and shore fisheries course at the South Portland Vocational Technical Institute, under the direction of the state department of education plus an advisory committee representing various branches of the state's fishing industry.

Among the courses that would be taught are navigation, state-federal fishing laws and Coast Guard regulations, marine engines, conservation of natural marine resources, marine biology, fishing methods and gear, marketing, business management and boat maintenance.

Harris Adds Electronic Lines

The Harris Co. of Portland, Me. has been appointed authorized dealer for the new line of Sperry Piedmont marine products, which includes radar, automatic pilots, direction finders and loran. Harris also is a new distributor for Ray Jefferson radiotelephones, which cover the 35 to 150 watt range.

Massachusetts Fisherman to Receive Mariner's Medal

Capt. Tom Parisi, skipper of the 95-ft. dragger *St. Nicholas* and his crew of seven men are to receive the Gloucester Mariner's Medal.

Parisi and his crew, battling their way through a blizzard to Isaac's Harbor, Nova Scotia, their radar out of commission, on January 6, saw four Canadian fishermen hanging to the wreckage of their 30-ft. power boat.

At risk to themselves and their vessel, they brought the *St. Nicholas* close to the shoal and rescued the four men who later were hospitalized suffering from exposure.

Big Catch of Grey Sole

Capt. Thomas Brancaleone of Gloucester, Mass. and his six-man crew, aboard the Gloucester dragger *Joseph and Lucia* hit the jackpot on their first trip of the New Year. They docked at Curcuru Bros. on the 9th of last month with a hail of 120,000 lbs. of grey sole, which sold for 19 cents a pound for large and 10 for small. The vessel's gross stock was estimated to be close to $20,000 and the gross share was expected to be near $1,000.

Gloucester Fishermen Opposed to the Anti-Seining Bill

The anti-seining bill co-sponsored by Rep. John F. Dolan of Ipswich, according to Capt. Benjamin Curcuru would effect seriously two branches of the Gloucester, Mass. fishing industry, pogie seining and the whiting fishery if it becomes law. The bill would prohibit seining as well as dragging within the three-mile limit. Fisheries leaders are agreed that seining is impossible outside that limit.

Curcuru stated that there are from 15 to 20 Gloucester boats which would have to join the whiting fleet if that legislation stopped them from seining porgies. If they go whiting fishing, they will put more of the fish on the market, knocking the price down and hurting the business.

The bill is to be heard on March 25 by the Legislature's joint committee on natural resources and at that time Dolan has suggested that he will amend it by a resolve and refer it back to the Department of Natural Resources.

Dolan himself does not think the bill will go very far but he stated he wants the commercial and sports fishermen to live peacefully together, and he feels that some solution will be found which will be agreeable to everyone.

New Bedford Vessels Repowered

Two New Bedford, Mass. scallopers, the *Elizabeth N.* and the *Laura A.* are being repowered with Waukesha Diesels at the Hathaway Machinery Co., Fairhaven. The *Elizabeth N.* engine is a Model LRDBCM, rated 335 hp. continuous at 1200 rpm. It is fitted with #3774 Snow-Nabstedt 3:1 reduction gear, Snow-Nabstedt 2:1 power take-off, and Ingersoll-Rand air starting system.

The vessel has a 12 hp. Lister auxiliary and her 56 x 40 Columbian propeller has been reconditioned. She is equipped with a Hathaway trawl winch Model 653.

The *Laura A.* is being repowered with a Model LRDBC-SM Waukesha Diesel, rated 555 hp. continuous at 1200 rpm. It is fitted with a #3971-352 Snow-Nabstedt hydraulic 3.5:1 ratio and American Bosch Hydrotor starting system. Workmen will fabricate a steel trunk, install new pilot house and change the position of her fuel tanks forward to the sides.

Hathaway has sold a Model LRDBCM Waukesha Diesel for the Maine dragger *Kennebec* of Portland, owned by the Maine Marine Products, Inc. It is being installed at the Frank Sample boat yard in Boothbay Harbor. Her six year old #3774 Snow-Nabstedt reverse reduction gear is being rebuilt at the Snow-Nabstedt factory. She has American Bosch Hydrotor hydraulic starting system and Kewanee-Ross heat exchanger.

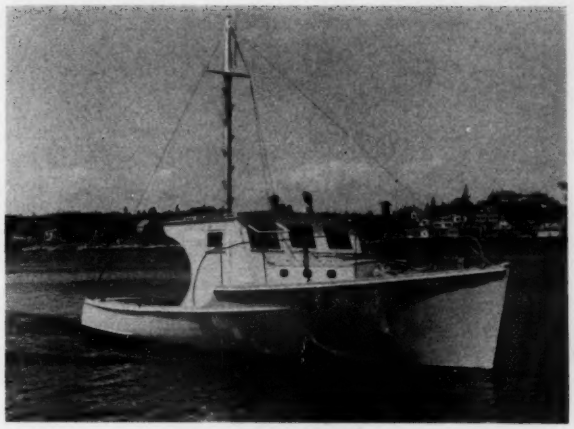
Record New Bedford Scallop Trip Landed

The largest single trip of sea scallops reported in New Bedford, Mass. in more than five years was landed January 21 by the *Louise*, owned by Morris Phillips of Fall River. She hailed a 19,000 pound catch after 6½ days of fishing and received 60 cents a pound for the shell fish. In April of 1953 the *Empress*, now the *Lillian B.* landed 20,500 pounds and received 46.75 cents a pound for them.

New Bedford Landings Increase

Landings at New Bedford, Mass. during 1958 increased more than 7,000,000 pounds over the previous year, due mainly to the 10,000,000 pound increase in the yellowtail flounder catch. The total valuation for the year amounted to $13,790,500 for the city's 111,350,000-pound catch of food fish, industrial fish and scallops.

Cod landings more than doubled in New Bedford during 1958 while haddock landings dropped slightly. The fluke catch was down 2,000,000 pounds and the scallop total was 1,000 pounds below the 1957 peak year. Swordfish landings increased by nearly 300,000 pounds and blackback and lemon sole catches increased slightly.



Lobster boat owned and operated by Pat Elderken of West Southport, Maine, the "Charlotte C" is 38' long and is powered by an 85 hp. Allis-Chalmers 6DAMR-273 Diesel which turns a 22 x 17 propeller.

Health and Welfare Benefits For New Bedford Fishermen

New Bedford, Mass. fishermen and their families will be recipients of health and welfare benefits under a contributory plan adopted in January by the New Bedford Seafood Producers Assoc., representing all fishing vessel owners, and the New Bedford Fishermen's Assoc.

The plan includes a $1,500 death benefit for fishermen, $6 a day up to 26 weeks for hospitalization and a clothing and gear allowance up to $200 in the case of loss by fire or sinking. Dependents benefits include $10 a day for hospitalization up to 21 days and surgical benefits up to $150 based on a rate schedule. The new plan replaces the Benevolent Fund which covered only fishermen.

Cape Cod Trap Boats Repowered

Two trap net boats have been repowered at Provincetown, Mass. by Flyer's Boat Yard. One is owned by Consolidated Traps, Inc. and has a new 3-71 General Motors Diesel rated 101 hp. at 2100 rpm., with Paragon 2:1 hydraulic reduction gear, power take-off, Jabsco bilge pump and Marmac controls, and heat exchanger cooling.

The other repowered trap boat is owned by Monument Fish Co., Provincetown, and has the same new equipment with the exception of bilge pump. The engines were sold by Hubbs Engine Co.

Good Tuna Schools Off Cape Cod

The Fish & Wildlife Service vessel *Delaware* docked at New Bedford late last month and reported that there are strong indications that sizable schools of tuna are available year-round in waters only 230 miles from New Bedford.

This was the *Delaware's* first attempt to find tuna in these waters in mid-winter, and it was successful. The area where the fish were caught is only 140 miles from Nantucket Lightship.

It is now thought the development of a commercial tuna industry in this area is much more feasible and that availability of the fish would presumably be a strong argument for the establishment of tuna processing plants in New Bedford.

Woods Hole Fisheries Conference

More than 40 biologists and statistical agents of the Fish & Wildlife Service's Bureau of Commercial Fisheries attended the 4th annual conference last month at Woods Hole, Mass. Among the conferees were members of the Bureau's branches of marine and inland fisheries, statistics, market news and the Maine Dept. of Sea & Shore

Unloading at Ell Vee Dee, Inc., plant New Bedford, Mass. Left to right: "Midway", owned by Gerald Moriarty and Ernest Clattenberg; "Major J. Casey", owned by Mike Griffiths; and "Chas. E. Beckman", owned by William Mathisen.

Fisheries, who heard a Woods Hole biologist review their research programs of the year.

Dr. Herbert W. Graham, a laboratory director, explained how the different branches cooperate to present to the fishing industry a realistic appraisal of the local fisheries.

Reports were presented on the fisheries for haddock, cod, ocean perch, yellowtail flounder, industrial fishes and scallops.

Net Machine Demonstration Extended At Portland, Maine

The demonstration of the new Amita patented automatic power net machine at The Harris Co., Portland, Me. has been extended through the first week of March. Made by Amita Fishing Net Mfg. Co., G. K., Toyohashi, Japan, the machine is designed to produce both single and double knot fish netting.

Several of the machines already have been installed in European countries. K. Okabe, sales manager; and Y. Suzuki, chief engineer for Amita, are in charge of the Portland demonstration.

Rudox Handling Lister and Allis-Chalmers

Rudox Engine and Equipment Co., Route 3, Secaucus, N. J., has been made distributor of Lister Diesels for all of New York State, Northern New Jersey and Southern Connecticut. The firm also now handles authorized sales and service for Allis-Chalmers Diesels throughout Connecticut, in addition to New York, Long Island and Northern New Jersey.

Established 9 years ago, Rudox has been in its present, modern building for 2½ years. Edward Rudlinger is president and general manager; Arthur A. Liefke is sales manager; Maurice Roy, service manager; Fred Ruggiero, parts manager and Howard Dahl, sales engineer.

The firm has full shop facilities, including a dynamometer for Diesel engine service; and load testing equipment for generating sets. Pumping units, generator sets and switchgear are built to specification, and personnel is available to handle engineering drawings.

Rudox also is dealer for Aeroquip flexible hose, Briggs & Stratton engines, Turner Quick Start and allied accessories.

Rhode Island Passes Bill to Extend Scallop Season

The Rhode Island House passed and sent to the Governor a Senate bill giving the director of agriculture and conservation authority to extend the annual scallop season as long as 45 days beyond the normal December 31 closing date when he finds that a substantial quantity of adult scallops remains unharvested and consequently vulnerable to winter mortality.

In other legislative action, a bill was introduced last month to open an area in the upper East Passage and mid-bay waters between Quonset Point and Prudence Island to quahaug dredging.

The area outlined in the bill lies in the East Passage between the southern end of Prudence Island, the west side of Aquidneck Island at Middletown and the north tip of Conanicut Island and north and west of the latter point in the mid-bay waters between Quonset Point and Prudence Island. The measure, which went to the fisheries committee, suggests a daily limit of 2,000 pounds per boat.

A resolution appropriating $25,000 for continuation of the annual quahaug transplanting program of the State Department of Agriculture and Conservation was passed last month by the state Senate and sent to the House. The measure directs that $15,000 of the sum be spent in transplanting quahaugs from polluted waters of the Sakonnet River and the $10,000 balance in whatever waters the director of agriculture and conservation selects.

New Jersey Fishermen Protest Heavy Dredges

Nearly 200 persons from Cape May and Cumberland Counties met last month to seek suggestions for the utilization of the area in Delaware bay south of a clam line. The meeting came as a result of renewed pressure from a group of Cumberland County oystermen for legislation which would allow the use of dredges below the clam line. Opposition to heavy dredges in the clam and oyster fields of Lower Delaware Bay was voiced by a majority of the speakers.

Before the speakers addressed the group, Dr. Thurlow Nelson, a marine biologist showed slides of a number of dredges and rakes used in Delaware and Raritan Bays. He stated that the area south of the clam line can be utilized with a rake similar to that used in Raritan Bay. This rake would effectively cultivate the bottom, increase the harvest of shellfish, promote growth of young shellfish and better fishing by improving the bottom.

Nelson warned against the use of heavy dredges south of the clam line and stated that the Shinnicock rake had been used for over 60 years in the Raritan Bay area and that the clammers there contend there are more clam in that area than ever.

Speaking for the Shinnicock rake and opposing heavy dredging were Mike Abinanti, Villas; Dave Beal, Woodbine; Eugene Bennett, Court House; Roland Cake, Eldora; Walt Dyer, Wildwood; Al Eisele, Court House; Ken Grimm, representing the Fresh Water Fishermen's Assoc. of Wildwood; Robert Neeley, Villas and Lou Rodia, North Wildwood.

Speaking for the heavy dredging were Dave Wallace of Annapolis, Md.; Harold Bickings of Bridgeton and Norman Jeffries, Port Norris.

California Men Introduce Tuna Stabilization Act

Congressmen James B. Utt and Bob Wilson of California, have introduced legislation to aid the domestic tuna industry. They are the authors of new legislation which would be called the Tuna Stabilization Act of 1959. This legislation, would authorize the Secretary of the Interior to pay tuna producers an amount equal to the difference between the market price and the tuna stabilization price. The bill sets out the stabilization price to be 19 cents a pound for albacore or $380 per ton, 15 cents for yellowfin and bigeye or $300; 14½ cents for bluefin or $290; and 13 cents for skipjack or $260. Both Congressmen have also introduced two versions each of a plan to regulate the importation of tuna.

One set of bills provides for a quota based on the five-year average of 35 per cent of average apparent annual consumption of tuna in the United States, plus duties up to 6 cents a pound, on all forms of tuna other than prepared or preserved tuna, which would be dutiable at the rate of 35 per cent ad valorem. The other set provides for no quota, but settles for a duty of 3 cents a pound, based on whole fish weight, on tuna, whole, frozen, discs and loins.

New Engines Installed

Hover Equipment Co. of Monterey, Cal. has installed a G-M 6110, 300 hp. engine in the 60 ft. purse seiner *Riso Brothers*, owned and skippered by Jack Riso. The dragger *Anna Alma* has been outfitted with a G-M 6-71 by her owner Freeman Arbo of Moss Landing.

California Boats Lost

Two boats well known in Moss Landing were lost at sea recently though fortunately their skippers were saved. Jim Barbeau was on his way into San Diego from the albacore grounds when his boat *Luwella* went on the rocks at Point Loma. Barbeau got off safely but the boat was a complete loss and so was the valuable catch she carried.

The *Barbara*, owned and skippered by Johnny Sponarich drifted onto the rocks near Santa Barbara. Coast Guardsmen unable to reach the troller by cutter, secured a line to the boat and brought Sponarich off. The vessel soon broke up on the rocks.

Landings at Crescent City, California

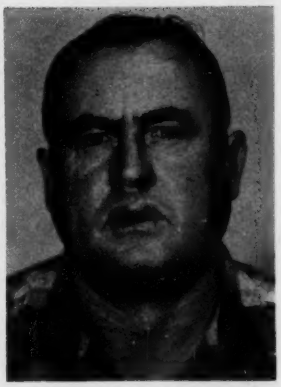
Commercial fishermen delivered more than 5,500,000 pounds of fish and crab to the Citizen's Dock at Crescent City during 1958, according to harbor master Darold Richcreek. This catch was valued at nearly $800,000.

Crab catches commanded 75 per cent of the year's total. The other 25 per cent represented shrimp, salmon and dragboat operations.

Up to the 17th of January this year the California Shell Fish Co. of Crescent City reports handling 408,480 pounds of crab. West Coast Crab of Crescent City handled an estimated 18,000 to 20,000 pounds a day through the 17th. Both companies have ten boats fishing for them. At Eureka, Hunter-Foland reports handling about 800,000 pounds of crab since the plant started buying on December 28th.

Service and Sell Electronic Equipment

Dale Detwiler of San Jose recently opened a shop at Mass Landing for sale and service of marine radios and depth finders. Kaar, Bendix and Apelco radios, Raytheon and Bendix depth finders are now available.



Left: Attorney Anthony V. Nizetich, new manager of the San Pedro Fishermen's Cooperative Association. Right: Joseph Califano, Association president.

New Officers for San Pedro Co-op

Two major changes in top personnel of the San Pedro, Cal. Fishermen's Cooperative Assoc. were announced at the annual boat owners dinner last month. Joe Califano was named as the new president of the board of directors, succeeding Matt Simundich.

Also taking office at the same time were Matt Dragich, vice-president; Anthony DiLeva, secretary-treasurer; and directors Barney Marincovich, Norman Mezin, John Sima, Anton Misetich and Anthony Pisano.

The second change was the naming of Atty. Anthony V. Nizetich of San Pedro as the new manager of the Association, succeeding Mason Case, who has held the post since November 1958. Case said personal reasons were responsible for his resignation which was effective immediately.

Oppose Controls on California Fishing

Commercial fishermen and their unions are opposing controls and limits on catches off the California coast. Mason Case of the Fishermen's Cooperative Assoc. of Los Angeles Harbor voiced opposition to industry controls to the State Assembly Interim Committee on Fish & Game.

An opposite view was voiced by Bob Ketcham representing the Southern California Sport Fishing Assoc. He recommended that the State Fish & Game Commission regulate both sports and commercial fishing. At present the Legislature governs commercial fishing, and sport fishing laws are administered by the Fish & Game Commission.

California Tunaboat Assoc. Loan Fund

The American Tunaboat Assoc. at San Diego is setting up a $100,000 fund with which to advance money to tuna boat operators for voyage expenses. Financing has been obtained from the Fish & Wildlife Service under the Fisheries Loan Fund.

It was made necessary because canners no longer advance trip expenses as freely as they did before local boats began selling fish at auction. The auction replaced individual agreements with the canneries. Loans from the fund are paid back to the Government rather than to the association.

California Schooner Converted

The schooner *Hispaniola* has been converted into a bait catching and freezing boat at San Diego by two men—Madison D. May and Richard Brock who believe they have developed the kind of product sport fishermen have been waiting for.

They have fitted the 65 ft. vessel with brine tanks, packaging machinery, a low temperature holding room, and other equipment. The *Hispaniola* will cruise the coast and catch bait wherever it can be found. Bait will be quick

Elevators help the Whiz Fish Co. of La Conner, Wash. unload its tenders quickly while handling the fish gently. Fifty tons may be unloaded in as little as two hours.

Washington Elevators Unload Fifty Tons in Two Hours

When a Puget Sound fishing tender comes in with a catch of 15,000 salmon, the vessel has to be unloaded in a hurry, and without damage to the fish. Getting the salmon out of the boat and into the cannery is one of the most unusual tasks of Link-Belt conveying and elevating machinery.

Whiz Fish Products Company operates one cannery at La Conner, Wash. and another in Southeastern Alaska at Kake. The company has five tenders based at La Conner and seven in Alaska, which bring the catch in from the fishing boats to the canneries. Each tender usually makes one round trip each day during the season from July to December.

The tenders at La Conner normally are on the water two or three hours each day. Point Roberts, one of the longest runs, is four or five hours away and occasionally it is necessary to travel all the way to Cape Flattery, a two day trip. The catch of several fishing boats is transferred onto a single tender which rushes back to La Conner. Averaging 6½ pounds each, the salmon in a fully loaded tender weigh close to 50 tons.

The fish are unloaded from the tender in about 45 minutes, by two men and a Link-Belt vertical elevator especially designed for the task. Without the elevator it takes four or five men about three and one half hours unloading by hand. With the elevator, one man pushes the fish in with his feet, loading about ten or twelve fish into each bucket. The buckets lift the fish out of the hold onto a chute, picking them up and laying them down without damage. A flight conveyor on the dock carries the fish into the cannery, where they are immediately processed.

The elevator, about twelve feet high, is fitted right into the hull of the vessel. The buckets are about 3 feet wide, spaced on two foot centers. The Link Belt plant in Seattle designed the elevator and has installed one in each of seven tenders owned by the Whiz Fish Products Co., all five based at La Conner and two of the Alaskan Craft.

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frozen and packed right on board. They will use herring, sardines and other small fish.

Plans are to put up the frozen bait in one-pound packages. May has been experimenting with the project for a year on a small Monterey-type fishing boat and has found a market for all the frozen bait he can supply.

Oregon Sets Seasons For Columbia River Fishery

The Oregon Fish Commission on January 29 said it had designated seasons for the commercial fishery on the Columbia River for this year. Major changes in regulations include a February 15 opening of the winter gill-net season. This season previously opened January 29.

The entire month of November also has been deleted from the commercial open-season list. Fish departments of Oregon and Washington approved this closure in an effort to help escapement of dwindling stocks of silver, chum and Chinook salmon.

Oregon Fleet Waits Price Agreement

Astoria's otter trawl fleet remained in port last month awaiting an agreement between fishermen and boat owners on prices and other conditions for crews working drag boats. Boat owners were reported to be considering formation of a marketing association which could deal with the fishermen, represented by the Alaska Fishermen's Union.

A list of bottom fish prices for 1959 was submitted to boat owners at a meeting January 12. Suggested prices were similar to those asked by the Alaska Fishermen's Union in Seattle and Bellingham. The proposed agreement also included provisions for unemployment compensation.

Washington Associations Elect Officers

Officers elected by the Fishermen's Marketing Association of Washington, Inc., and Northwest Trawlers' Assoc., Inc. for 1959 were announced last month.

Dan Luketa, skipper of the *Western Flyer* was elected president of the Northwest Trawlers. Other officers are Mitchell J. Evich of the *Avalon*, vice-president; Rudy Schulze of the *Paul L.*, secretary-treasurer; and Chet Westman of the *Dakota* and Walt Miner of the *Coolidge II*, trustees.

Minor Levold of the *Zarembo II* was re-elected president of the Fishermen's Marketing Assoc. Carl Serwold of the *Tordenskjold* was named vice-president; John Jorgensen of the *Betty Jane*, secretary-treasurer, and Olaf Angell of the *Arthur H.* and Sig Aarvik of the *Traveller*, board members. Manager of both associations is John Wedin.

Washington Fish Production for 1958 Shows Improvement

Washington's fishing industry had some weak spots in 1958, but the total catch of all species was 27,600,000 pounds more than in 1957. All categories showed increases. The salmon catch last year was more than 53,000,000 pounds, compared with over 44,000,000 in 1957. Bottomfish landings amounted to more than 49,000,000 pounds, compared with over 46,000,000 the previous year. Shellfish production not counting oysters was more than 6,000,000 pounds, up from the previous year's 2,000,000.

The 1958 season was characterized by warm ocean currents, with water temperatures off Washington and British Columbia averaging 7.2 degrees Fahrenheit above normal.

Halibut boats returning across the Gulf of Alaska frequently caught quantities of albacore and Washington landings of that species were the highest since 1950.

American fishermen caught 32,200,000 pounds of Adams River sockeye, second only to the 34,600,000 pounds landed in 1954. In numbers of fish, the 1958 season set a record, with 5,252,000 fish caught, by the American fleet, but the fish averaged nearly a pound smaller than the cycle year of 1954.

Oyster production in Washington during 1958 continued at the high level attained in 1957, with total production down about 100,000 pounds, but a bright spot was the increase in Olympia oyster production to 30,430 pounds from the record low of 18,470 pounds in 1957.

Other shellfish production figures for 1958 show that hardshell clam production of 1,825,000 pounds was the best since 1940 and crab production of 12,164,000 pounds was the third best in state history, being exceeded only in 1948 and 1949.

Seek Action to Save Salmon Runs

Four Democratic Senators, accusing Japanese fishermen of depleting salmon runs in the North Pacific, early this month demanded immediate, high-level negotiations between the United States and Japan to settle the dispute. They would determine a new provisional line for Japanese salmon fishing in the North Pacific. Previous efforts to shift the eastern limit from the 175-degree west longitude line set by a 1952 treaty have been unsuccessful.

The Senators say that the 1952 treaty permits the Japanese to harvest millions of Alaska-spawned salmon on the high seas in areas where American nationals are prohibited from fishing Moreover, they say, the Japanese use equipment which American conservation practices and standards render unavailable to American fishermen.

1958 Salmon Pack Increases

With more salmon in both the Columbia River and the waters of Alaska, the 1958 pack totaled about 3,586,000 cases, for a total value of $94,890,000.

The catch was of the finest quality salmon, and Royal Chinook in the Columbia River showed a sizable increase from that in 1957—220,000 cases in 1958 and 112,000 in 1957.

Halibut Commission Meets in Seattle

More than 100 men gathered in the Fisheries Center at the University of Washington last month for the opening of a week-long meeting of the International Pacific Halibut Commission. The opening session was presided over by Seton H. Thompson, St. Petersburg Beach, Fla., of the Fish & Wildlife Service. Multiple seasons, catch limits, nursery areas etc., were discussed.

Thompson introduced William A. Bates of Ketchikan, newest member of the six-man group which includes three U. S. and three Canadian representatives. American representatives also include Matteas Madsen of Seattle.

Richard J. Myhre of Edmonds, biologist in charge of the tagging section of the commission reported on the condition of halibut stocks in the North Pacific and said they were very good.

"MITZIE MARIE" is owned and skippered by Robert Comstock and son Robin of Agate Beach, Ore. The 39' salmon and tuna boat is powered by a 6-71 General Motors Diesel with 1.5:1 reduction gear. Other equipment includes Bendix depth sounder, Northill anchor, Kaar direction finder, Wood Freeman automatic pilot, and Collins radio.

Alaska Salmon Trap Licensing Halted

The decision by Alaska's new governor, William E. Egan, to halt the licensing of salmon fish traps in Alaskan waters, will, according to Sam Rubinstein, president of Gillnetter's Salmon of Seattle, prove a boon to the entire salmon industry. This step will eliminate competitive advantages that some canners have had for some years by reason of the low cost of trap caught fish.

There are presently 232 fish traps in Alaskan waters, owned mostly by Seattle and West Coast salmon canneries. It has long been Alaskan officials' contention that natives of the new state have been frozen out of this lucrative method of catching salmon because of early cannery history.

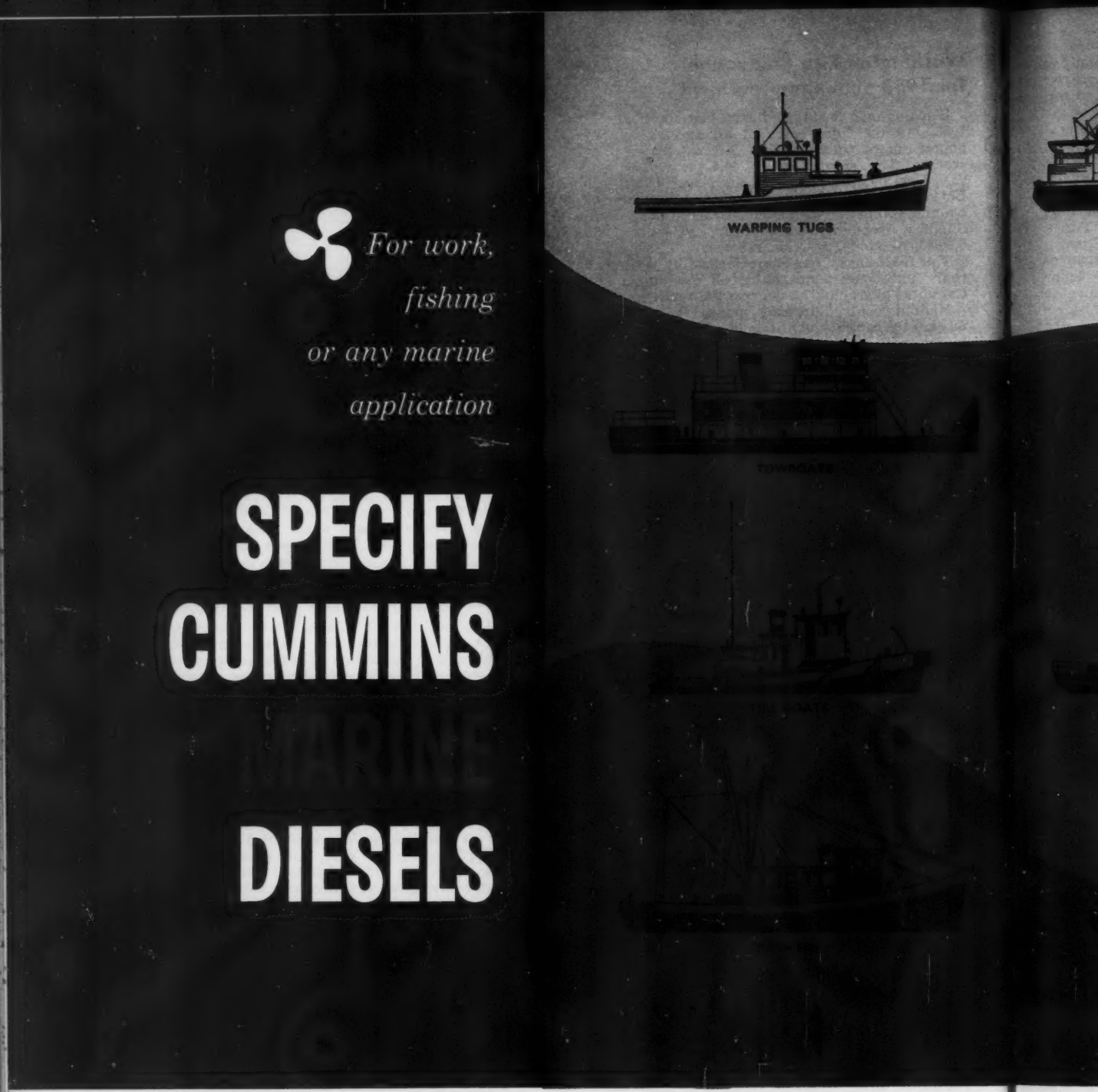
Fish trap license fees brought $333,900 into the Territorial Treasury last year. This revenue will be lost to the new state, but Mr. Rubinstein believes it will be more than made up by the increased value and productivity of the many fishing vessels and canneries active in the Alaskan salmon industry.

The elimination of fish traps will also prove of great value in controlling the annual salmon catch. Critics of fish traps have long claimed that this method of catching salmon depletes the salmon run to a dangerous level. It also forced independent salmon fishermen and canneries to the wall because they could not compete with the cheap trap-caught fish.

Mr. Rubinstein believes there may be a slight price rise in Alaskan caught salmon for a short period of time because it will take some time to catch the same number of fish by gillnetter and purse seining techniques. Until that time, there will be a brief shortage of salmon. However, by 1960, the salmon catch will have returned to normal in Alaska and food dealers will find no trouble in purchasing adequate amounts of canned salmon. Mr. Rubinstein also points out that salmon supplies from the Columbia River and Puget Sound will continue to help offset any decline in the Alaskan salmon catch.

In the meantime interested parties were awaiting for Secretary of the Interior Seaton to give his decision on whether salmon traps will be permitted or outlawed in Alaska waters.

Industry spokesmen had urged delay to ending use of the traps, saying that prohibition this year of traps in Alaskan waters would be an economic catastrophe to the industry.



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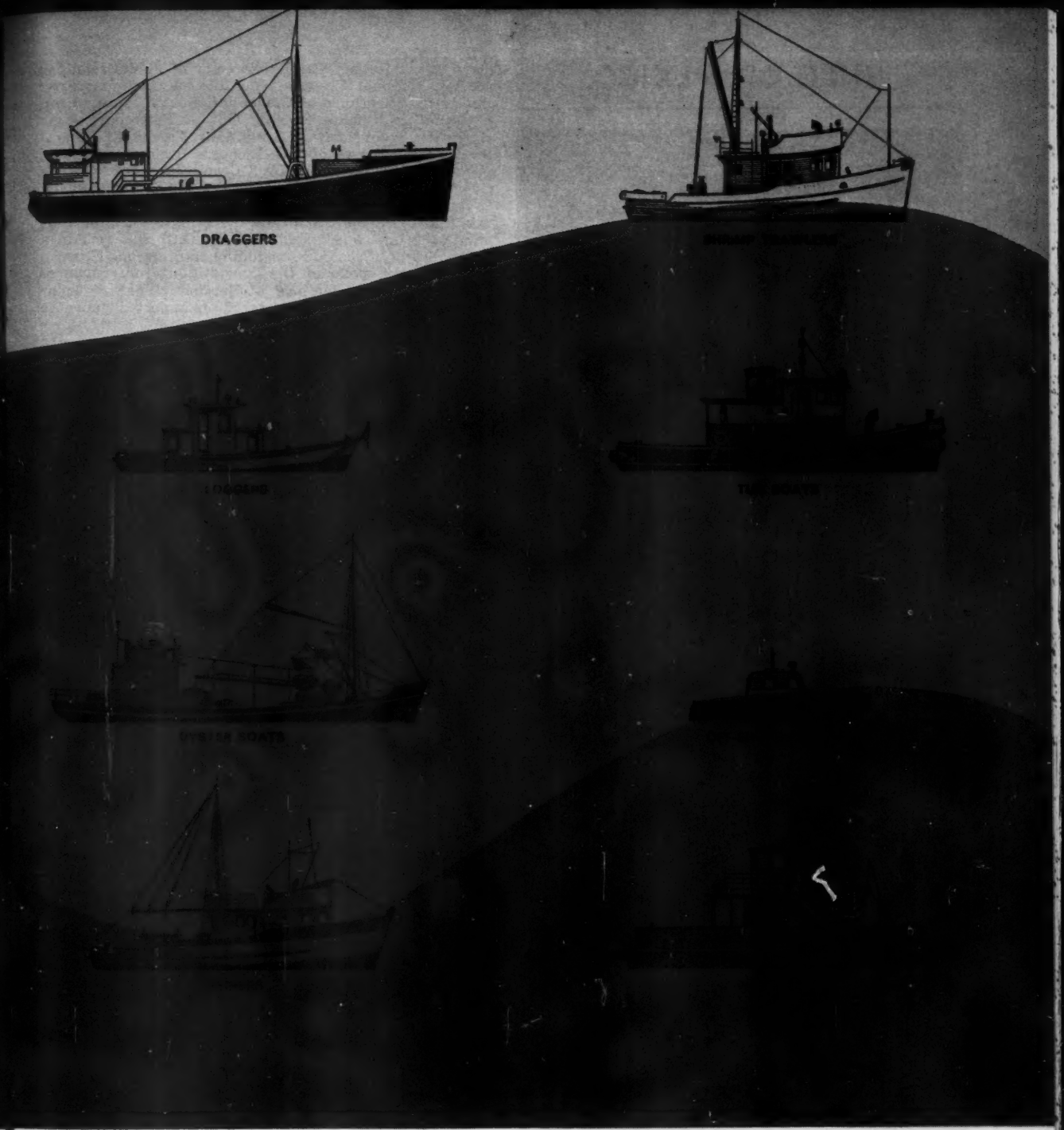

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Donald Y. Aska, chief Market Bureau Division, F&WS, Washington, D. C.; Ed Smith, fisheries marketing specialist, Pascagoula, Miss.; and Victor Mavar, part owner Mavar Shrimp and Oyster Co., Biloxi, Miss.; attended the Market Bureau's weeklong meeting in Biloxi.

Marketing Bureau Meets Biloxi Seafood Producers

Twenty field representatives of the Bureau of Market Division, Fish & Wildlife Service, held a one-week series of meetings in Biloxi, Miss. in January 21-28, to develop a flexible program to meet the needs of the industry in marketing seafoods. Heading the field agents was chief of the Bureau, Donald Y. Aska, Washington, D. C. This group usually meets in Washington, but, under a new policy, they are meeting in areas which are large seafood producers, in order to meet the people and study the marketing problems first hand. Business sessions were not open to the public.

Under discussion and consideration, were problems of past and future affecting marketing. In promoting sales, the group normally works through advertising media and contacts such organizations as hospitals, schools and through attempts to get the attention of the house wife. The variety, nutritional value, abundance, and preparation of seafood are subjects on the program outlined for the groups consideration and study. The group was scheduled to make several trips of inspection to Biloxi seafood factories to study problems of the local producers.

Many of the shippers and packers on the Mississippi Gulf Coast were in attendance at a reception and buffet which they hosted for the marketing group, at the Trade Winds Hotel, where all the meetings took place.

Those who appeared on the programs during the conclave were Murray Wheeler, director of public relations for the National Fisheries Institute, Washington; Fritz Bundy from Gorton's of Gloucester, Boston, Mass.; Leon Kenny from Pinellas Seafood Co., St Petersburg, Fla.; Harry Bell from Harry Bell and Sons Seafood, St. Petersburg; Jack Richards of Jack Richards Brokerage, Mobile, Ala.; Tom Murphy of the Bluff Creek Canning Co., Vancleave, Miss., and Joe Romos of Romos Sea Food, Bayou LaBatre, Ala.

Shown at the recent Bureau of Marketing Division F&WS meeting in Biloxi, Miss. recently are Mrs. Rose Kerr, U. S. Home economist; Roland C. Agregaard, Biloxi wholesaler, Chairman; and David Aiken, Pas Crab Co., Pascagoula, Miss.

Murphy told the group how he canned the first Gulf of Mexico tuna and stated that the Gulf was rich in a great variety of seafoods, including sardines and Spanish mackerel. He spoke of the competition from Japanese products, possible because of the low Japanese labor wages, and he advocated a tariff on imported Japanese tuna.

Romos spoke of the great market that is open for the sale of frozen mullet, a fish he stated, that was frowned upon by most of the public because they consider it a cheap fish. He said there should be a way to change the name to give it more consumer appeal.

Richards reported that his frozen fish sales are far above those of other frozen foods. He stressed increasing seafoods sale in his talk and urged that the consumer be advised that seafood fats are less harmful than other types of fats. He felt that seafood sales to hospitals, schools, and other institutions enjoyed a great increase today because of the use of the deep freeze.

Those of the Marketing Service who attended the meetings were Aska, Norman Wigutoff, Washington, D. C.; George Gross and Henry Boies, Fort Worth, Texas; Robert Balkovic, W. F. Carbine, and Wilt Jones, Ann Arbor, Mich.; Fred Hipkins, Donald E. Powell, and Miss Ann Davies, Seattle, Wash.; Bob Finley, Baltimore, Md.; Roy Stevens, and Jack Browner, Jacksonville, Fla.; Mrs. Rose Kerr (in charge of home economists) College Park, Md.; Ross Hatten, San Pedro, Cal.; Frank Anderson, New York, N. Y.; Paul Parodis, Boston, Mass.; Ed Smith and Miss Bertha Van Landingham, Pascagoula, Miss.; and R. T. Whiteleather, St. Petersburg, Fla.

Chairman of the seafood industry committee for the Chamber of Commerce was Roland Agregaard, assisted by Wade Guice in preparation of the affair.

Gulf Seafood Landings Increase

Seafood landings at principal ports in the Gulf states showed a decided increase in all items except oysters when compared with production for last year. Records for 1958 show shrimp landings of 92.4 million pounds as compared with 90.2 million pounds in 1957. Edible finfish landings reached a total of 8.2 million pounds in 1958; 7.5 million pounds in 1957 and 7.3 million pounds in 1956. Blue crab production showed a substantial increase last year with 9.4 million pounds, while 1957 showed 8.9 million pounds and 1956, 7.6 million pounds.

Texas Association Votes on Shrimp Season

The Texas Shrimp Association met in Galveston last month for a two-day session, at which time they gave their support to the Texas Game & Fish Commission recommendation that bay waters be closed to shrimping except for three or four months in the fall. It also endorsed an open season of up to 60 days in the Gulf of Mexico.

The Association elected Oliver J. Clark of Port Isabel president; C. O. Robert, Aransas Pass, vice-president; S. M. Snodgrass, Port Isabel, secretary-treasurer. S. E. Herndon, Corpus Christi, was elected as chairman of the board. Other directors were Lewis Pashos, John Carinhas, Jr., Wallace Boudreaux and L. A. Weaver, Jr., all of Brownsville; Eugene Webster, Aransas Pass; James B. Jackson, Rockport; Morgan Davis and R. E. Clegg, both of Port Lavaca; W. W. Gore, Freeport and John Mehos of Galveston.

The legislation would also close outside waters in the Gulf to shrimping during the period that small shrimp migrate to open waters.

"Captain Max" Joins The Louisiana Fleet

"CAPTAIN MAX" owned by Max Thibodeaux and Nolton Bailey of Morgan City, La. is powered by a 6-110 General Motors Diesel. She is 67' and double rigged.

Conrad Industries, Inc. of Morgan City, La. recently delivered the 67' trawler *Captain Max* to Max Thibodeaux and Lolton Bailey of Morgan City. She is powered by a 6-110 General Motors Diesel, turning a Doran-Alabama 4-blade Southern propeller. A double rigged vessel the *Captain Max* is equipped with a new Stroudsburg 515 1/2TS with 1200' of ½" cable. Other equipment includes a Bendix DR-7A depth recorder, Metal Marine automatic pilot, and Fairbanks-Morse water pressure system for hot and cold water to galley, lavatory, and shower.

Fuel oil capacity is 4,600 gallons and fresh water totals 400 gallons. Bilge pumps includes ¼" Jabsco and a ½" Goulds electric. Captain Thibodeaux will skipper the new boat and operate out of Morgan City.

Two 600 ton capacity floating drydocks are operated by Conrad which employs several experienced ship-carpenters. Several repair jobs to shrimp trawlers have been completed recently. Presently under construction at the yard is a 62' stockboat.

Texas Shrimp Trawler Sinks

The *D & D I* out of Port Lavaca, owned by the Daniel & Delma Seafood Co. sank in the extreme southern tip of the Campeche Gulf with the three crewmen being rescued by the *Josephine Mathis.*

Oyster Comeback at Corpus Christi

After a decade of inactivity, the Texas oyster business in Corpus Christi and Nueces bays is being revived. Some 50 skiffs are tonging and carrying on grappling operations there, and the season is expected to last through April. One certified shucking house has opened on North Beach and two others are scheduled to open as soon as facilities are available.

Tom Edwards of Nueces Provisions Corp. is packaging between 50 and 100 gallons daily. It is his belief that the natural reefs have enough oysters to supply a three or four-year demand. His firm is paying oystermen an average of $6.50 per gallon.

New Steel Trawler Completed

The North Boat Works of Rio Hondo, Tex., recently completed the building of a steel shrimp trawler the *Fritz K.*, 65 ft. long with a beam of 18 ft. 6 inches and a draft of 6 ft. The boat has 5/16" steel plate and a keel molded from a 1" x 6" steel bar.

The pilot house is built on the stern and equipment for double-rigged trawls is on the bow. A custom-built tapered roller bearing hoist takes care of deck power needs. The trawler is powered by two Model 6-71 General Motors Diesel engines, having a rating of 295 hp.

Alabama Men Grow Oysters on Tires

Lew Rabby, Wilson Bosarge and Jack Wheeler of Coden have been conducting their own oyster-growing experiment for several years. Old tires, tin cans and other materials make good homes for oysters in Portersville Bay as these three men study to determine the best material for oyster growing.

Recently two tires were brought from the water. Both were covered with clusters of large oysters, approximately 100 per tire. The largest mollusks were less than two years old and most of them were only one year old. The oyster-growing project is carried out in waters approximately four feet deep several hundred yards off shore.

One of the basic things needed for large-scale development of individually operated oyster beds, the oystermen believe, is protection. Protection is needed to insure that oysters are not molested before the owner of the beds can harvest them.

Natural enemies of oysters, such as conch and drum, cut the oyster supply. Planting reefs should be done in spots and shells or other materials should be widely scattered to produce the best results.

With Mississippi Seafood Commission

E. H. Gautier of Pascagoula began his duties last month as secretary of the Mississippi Seafood Commission, replacing James L. Goff who recently resigned.

Gautier, who has had experience in the seafood business, was recently employed at Ingalls Shipbuilding Corp. in Pascagoula where he was the assistant boat foreman.

Shellfish Legislation Introduced

Congressman William H. Colmer of Mississippi has introduced a bill to prohibit the importation into the U. S. of polluted shellfish. The bill provides that no shellfish can be imported into this country unless the U. S. Surgeon General finds that the sanitary standards governing the harvesting and preparation of shellfish in exporting countries are not lower than the minimum standards prescribed by the Public Health Service for shellfish shipped in interstate commerce.

Colmer has also introduced legislation which would establish an import duty of 35 per cent ad valorem on any form of imported shrimp, fresh, frozen, prepared, canned or preserved in any manner.

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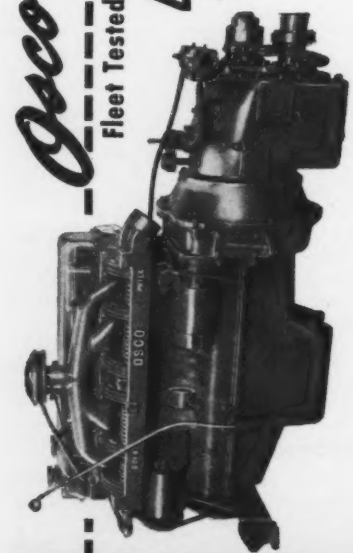

2½ MILLION proved ENGINE HOURS

Foreign Fisheries Increase Mechanization

The engine barrier, which existed among fishermen in the under-developed countries has been broken down, reported Jan-Olaf Traung, chief naval architect, Fisheries Division, Food and Agriculture Organization (FAO) Rome, Italy on his return from an 80-day round the world trip. Traung discussed with government officials and private individuals in various countries, participation in the second World Fishing Boat Congress to be held in Rome, April 5-10.

"I was most impressed by the developments in mechanization which are taking place in the Far East. It is clear that fishermen now are convinced of the value of mechanization, which enables them to catch 3 or 4 times more fish. Now . . .there is the problem of finding ways and means to supply the engines required by the fishermen. It is chiefly an economic problem, as it is often closely tied up with a system of government subsidies.

"Apart from this aspect, the main question now seems to be the introduction of an extension service which will help overcome the difficulties arising from the lack of communication between fishing villages. It is surprising the realize that the news of the successful introduction of mechanized fishing craft in a village does not spread along the coast. The next village, perhaps 20 or 30 miles away will hear nothing of it, as there is no road communication.

Traung said there was a noticeable change in the attitudes of governments towards fisheries. "Until recently, fisheries departments seemed to approach fishery development work from the scientific and biological point of view and were mostly concerned with introducing fishing regulations.

"On my recent trip I found that this had changed drastically and that they were now trying to stimulate production through the introduction of modern engines, mechanized gear, synthetic fibre nets, etc.

"The progress being made towards stimulating production is also reflected in the success of the training centers conducted by FAO experts. For example, last year the Indian Government in collaboration with FAO, organized a center at Cochin, India, for boat designers, and participants at this center have already made good designs of 30 foot fishing boats, which are now being built.

"This year there will be another center for about 20 designers. In addition, the Fisheries Technology Research Station at Cochin has included a boat section. Again, more than 100 boats have been built, based on FAO drawings, which is another indicator of the progress being made. But, this is only the start. In India alone there is a need to build tens of thousands of these small mechanized boats."

New Telephone Cable Marked by Buoys

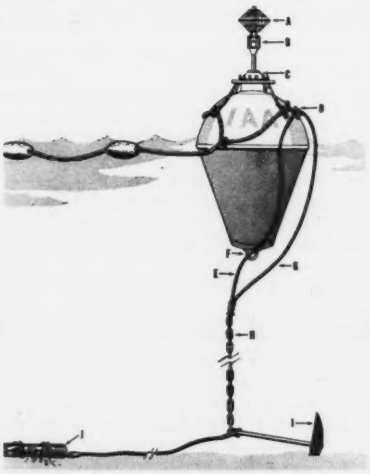
A bright yellow and red buoy may be seen bobbing in the Atlantic Ocean off the coast of North America and Europe during this year and next.

The buoy will mark an important obstruction to ships and fishermen. For in the vicinity of one of these buoys and stretching all the way to the mainland will be a newly laid telephone cable which may weigh 25 tons per nautical mile.

The American Telephone and Telegraph Company, with other companies and governmental agencies, is now engaged in the construction of telephone cable systems between the United States and Europe and the United States and Puerto Rico.

In addition to the brightly painted areas on its top, the buoy has several other features which help ship captains to spot it. A brightly colored flag is mounted about eight feet above the buoy to help locate it in the daytime, navigational lights make it visible at night, and a reflector provides a means of detection by ships equipped with radar.

Trawlers operating near these buoys might snag buoy moorings, or hook the cable, which of course could mean loss of trawling gear or serious damage to the cable.



A radar reflector. B obstruction lights. C dome holding light batteries. D trip has two steel ropes. One E holds cable, passes through ring F and other G releases buoy when recovering cable, fastened to H chain. I mushroom anchor. J cable-end.

The buoys used to anchor submarine cable are constructed of high grade boiler steel. They weigh 1½ tons and can support six tons of moorings.

6 MORE *for this fleet equipped with* FEDERAL PROPELLERS

When DIESEL ENGINE SALES built this second group of six vessels for PRODUCTOS REFRIGERADOS and PESQUERA ATLANTIDA it was to be expected that they, too, should be equipped with FEDERAL PROPELLERS, for both the builders and users know from experience that FEDERALS provide superior performance and that their "B-Bronze" alloy is easy to repair and lasts as much as three times as long as ordinary manganese bronze. Follow the lead of those who know and get more for your propeller dollars . . . switch to FEDERAL propellers. All types, all Standard sizes thru 72". Write for catalog.

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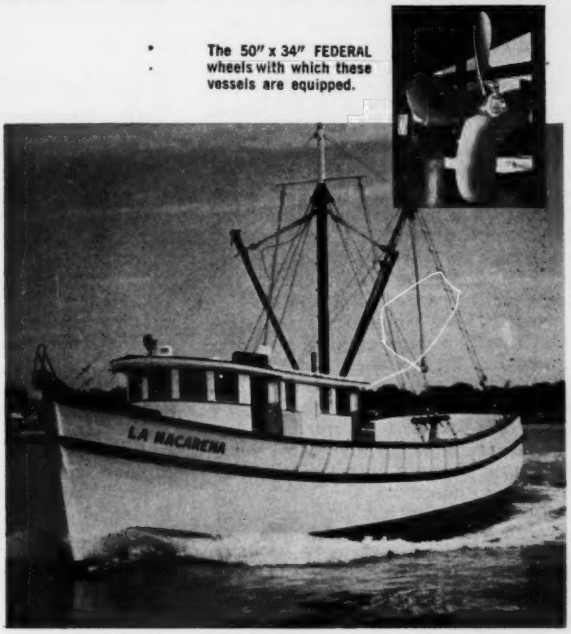

The 50" x 34" FEDERAL wheels with which these vessels are equipped.

Shrimp Cultivation at Bears Bluff

(Continued from page 9)

predators had been screened, gave almost double the weight return of shrimp over an unscreened pond with predacious fish. Ducks and otters are known to consume shrimp and fish in the Bears Bluff ponds.

Other records have shown a mortality of only 7.2 percent over a period of 94 to 104 days. In this case great care was taken to insure that only live, healthy shrimp were stocked. The 93 percent extreme not only was caused by predators, but the experiment was conducted through the winter months, when experience has shown sudden cold snaps to bring the water temperature down to 40 degrees F rapidly, actually killing the shrimp.

Experimental evidence has shown three crops of shrimp can be harvested from a single pond in one year. In South Carolina, 100-count white shrimp are available in February. If these are transferred to the pond, they can be harvested in early June. Young white shrimp become available in July for stocking, to be harvested in October and November. In addition, brown shrimp, although not as readily available as white, can be taken for stocking in April or May, to be harvested toward the last of July or later.

Thus, there is a possibility for three stockings of young shrimp a year. However, experience at Bears Bluff clearly indicates that the July to November crop of young white shrimp by far gives the best results, since their growth approaches one inch a month, whereas growth during the winter months in considerably less.

It is evident that the volume of shrimp naturally accumulating in such ponds is not sufficiently large to warrant pond construction. Nevertheless, experiments show that by stocking these ponds with small shrimp and keeping the number of predators to a minimum, production is feasible and can be considerably increased. Further research is also needed to develop better methods of securing young shrimp for stocking.

Tea Cakes Could Lengthen Shrimp Lives

A researcher from Thailand and another from Indonesia, while visiting the Bears Bluff Laboratories to observe Lunz' research into controlled shrimp and oyster production, explained that it was not impossible for their countries to produce, as much as 500 pounds of shrimp per acre. They went on to explain that this was in part possible through Sapolin, or pressed tea-seed cake.

The two men explained it as a by-product of the tea industry and Asian shrimp farmers for centuries have controlled unwanted fish by putting Sapolin into each shrimp pond. The Sapolin kills the fish, but does not harm the shrimp. After several unsuccessful tries, Lunz was able to obtain some of the tea-cake through the American consul general in Singapore.

The consul general was informed that for a 14-acre shrimp pond, 4000 pounds of the tea-seed cake is used. The cake is boiled in fresh water until it is fully dissolved and is then distributed on the pond at the lowest tide level. According to the informant, the predator fish in the pond will become stupified, and after a few hours will float to the top, where they may be collected.

It is important that the water be replenished immediately after collection, so that the concentration of Sapolin in the water can be reduced, to minimize the possibility of affecting the shrimp. Plans are being made to test the Sapolin through the winter, in an effort to determine what amount is necessary to kill fish but not shrimp. This is to be done in the laboratory in small sea water aquaria. If the Sapolin proves successful efforts will be made to obtain enough for large scale experiments in the ponds.

GREAT LAKES

Fishing Hampered by Winter Weather

Near zero weather with snow and stiff winds has hampered production of commercial fish recently from the Great Lakes. On Lake Superior, little open water netting has been functioning, with catches of lake trout and whitefish very poor. The market for these is strong, and prices for these are at a premium at the moment. Herring catches were fair, mostly through ice in the bays. Some of the bobbers using lines for lake trout through ice in the ice-covered bays were getting fair commercial quantity of lake trout for the gear they were using.

Nearly 1,000 commercial and casual fishermen were operating on the Green Bay ice for smelt and herring. Catches generally were fair but weather drove many of the fishermen from the ice temporarily.

Lake Michigan fishing ports were becoming jammed with ice and consequently much of the chub and perch production has tapered down to where many of the commercial commitments of fish are not being fulfilled.

On Lake Huron, primarily on Saginaw Bay, ice fishermen were making fairly good hauls of smelt and herring, together with several other species in the rough fish varieties. Weather has to a large extent hampered constant production, and many of the producers were a little reluctant to go out to operate.

Great Lakes Fish Take Increases

The commercial fish take from the Great Lakes showed an increase for the first time in seven years in 1958, members of the Michigan Fish Producers Assoc. were told at their 18th annual meeting which ended on January 20 at Traverse City, Mich.

Chubs and smelt comprised the major portion of last year's commercial catch of 25 million pounds, while trout and whitefish showed a decline. The 1957 catch amounted to 21.5 million pounds.

The association went on record in favor of the state conservation commission controlling game and commercial fishing on the Great Lakes. It also adopted a resolution opposing the diversion of additional Lake Michigan water by Chicago. Plans were announced for the United States and Canada to plant 750,000 yearling trout in Lakes Superior, Huron and Michigan in 1960, and of further attempts to control the predatory sea lamprey.

Lloyd Mollhagen of St. Joseph was elected president of the association, succeeding Walter Olson of Gladstone. Harold Lent of Standish was named first vice-president; Emil Kallinen of Chassell, second vice-president; and Roy Jensen of Escanaba, secretary-treasurer.

Mississippi River Fish Production

From the waters of the vast Mississippi River drainage area in 1957 the catch of fishery products amounted to 77,000,000 pounds, valued at over $7,000,000.

While practically all varieties reflected a decrease in production, reduced catches of buffalofish, carp, catfish and mussel shells accounted for most of the decline.

Rough fish taken as a result of lake stream management programs and marketed through commercial channels have been included in the data appearing in this report.

Scouting for Carp Worth While

The Wisconsin Conservation Department reports that scouting pays off in carp seining. By first finding where concentrations of the fish were gathered, two seine hauls this winter produced some 100,000 pounds of carp each. Last fall, a single net lift registered 325,000 pounds and two lifts produced 100,000 pounds each. The winter concentrations were spotted through the ice, the department said.

Ohio Fish Production Gains

October 1958 landings of fish at Ohio ports on Lake Erie amounted to 2,000,000 lbs. This is a gain of 103,000 pounds when compared with the same month of 1957.

The production of yellow perch, sheepshead and white bass was greater than in October 1957, while the take of carp, yellow pickerel and blue pike was less.

Yellow perch, carp, yellow pickerel, sheepshead and catfish were the leading varieties during the 1958 season with these five species comprising 90 per cent of the total catch.

Arthur J. Luebke

Arthur J. Luebke, 66, a member of one of the earliest commercial fishing families in Two Rivers, Wis., and master of fishing boats for many years, died February 5. Mr. Luebke was one of the founders of the Wisconsin Federation of Commercial Fishermen and served as one of its first presidents. He served on the City Council from 1928 to 1943 and twice was its president.

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Diesel Adaptability

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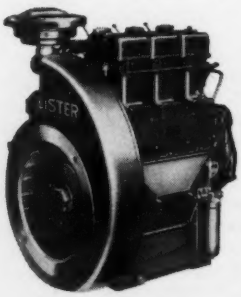
Model HA3 for auxiliary.



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Model SL2. 2 cyl. *8¼ HP @ 1800 RPM. Only 28" high, 25" wide
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Mr. Arnt Jensen, skipper of the *North Cape*, a dragger out of Cape May, New Jersey, recently purchased a Caterpillar D375 Marine Engine from PEMCO. If you ask Capt. Jensen why he selected Cat to repower the *North Cape*, he'll give you two very important reasons:

1. Dockside service from Maine to Florida
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EQUIPMENT and SUPPLY NEWS

Sperry Unveils New Line

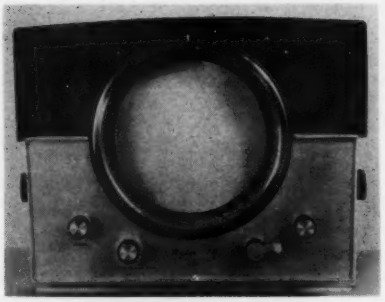
Sperry Piedmont Co., Division of Sperry Rand Corp., Charlottesville, Va. has introduced a new line of commercial products, which includes Loran, radars, direction finders, automatic pilots, and miniature gyro-compasses, produced for the small boat operator.

A one-unit Loran, reported to be more compact and smaller than the previous Loran sets available to large vessels, weighs 38 pounds. Sperry also has a 10" radar, equipped with range scales of ½, 1, 4, 8, and 20 miles. The equipment consists of a scanner transceiver unit and indicator unit. The Radar 10 is available with a 32-volt dc converter, 115-volt dc converter, or 115-volt ac converter.

Sperry has also introduced a new 5" marine radar. The two-unit Radar 5 system is equipped with a long and short range scale. A new magnetic compass automatic pilot with a 6" compass featuring the "dependability and reliability" of the established Maggi Pilot, is reported to have excellent accuracy, and compact design for easy installation.

Introduction of a new portable radio direction finder, designed to operate from a self contained battery supply, presages the company's entry into this particular field. A miniature gyro-compass, spherical in shape, 10" in diameter, is also featured.

Announcement has also been made of the appointment of Triton Marine Products, Inc., Great Neck Road, Great Neck, N. Y., as national sales agent. George Hinman, president of Triton, said plans are to market the new line nationally, through a select group of marine dealers.



New 10" Sperry radar is slightly larger than table model television.

Caterpillar Operating Costs Record

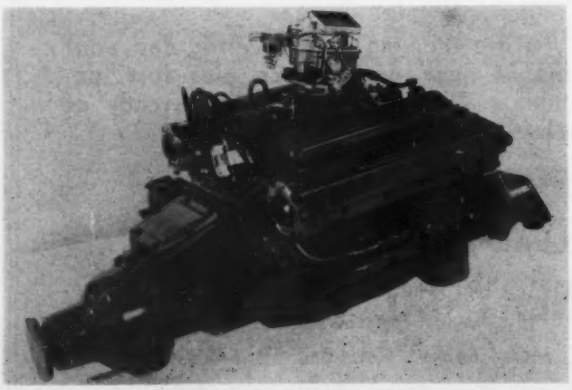
To assist owners in determining the cost of operating engines, Caterpillar Tractor Co., Peoria, Ill., has prepared a special 24-page Monthly Time and Cost Record Book. Twelve sets of pages are included on which to record, day by day, each month's individual expenses for an entire year. At the end of the record section is an annual summary sheet where the totals for each month can be entered to obtain the annual cost figures.

Spaces are available for recording both the quantity and cost of Diesel fuel, gasoline, lubricating oil, grease, filters, hydraulic oil and repair labor. Additionally there is space for the type and amount of miscellaneous costs. A repairs column allows ample room for recording repairs and costs. Another column allows the machine operator to record the actual hours the machine was operated. In order to record expenses as they occur, a pocket size Daily Time and Cost Record booklet is also available.

New V-8 Engine By Chris-Craft

A new V-8 marine engine recently was unveiled at the Chris-Craft Marine Engine Research, Development and Test Center in Algonac, Mich. The compact model 283 V-8 has 283 cubic inch piston displacement and a compression ratio of 8:1. It develops 208 gross hp., 185 corrected shaft hp. Direct drive or reductions of 1.5:1 and 2.1 are available.

Regular non-premium grade fuel may be burned in the new engine, which has a four-barrel downdraft carburetor. Pressure fed lubrication and 12-volt ignition systems are standard equipment. Full length water jackets and pre-tempering of engine coolant provide even operating temperature for sustained high speed operation. The new model 283 V-8 joins the Chris-Craft line of L-head fours and sizes ranging from 60 to 200 horsepower.



New Chris-Craft 238 V8 marine engine develops 208 gross hp. at 4000 rpm. Direct drive or reduction ratios offered.

New Heavy Duty Joy Air Motors

A new line of Joy Pistonair 5-cylinder, radial air motors for heavy duty service, which combines extremely high starting torque and sustained load-lugging ability with a simple throttle valve control, is offered by the Joy Manufacturing Co., Oliver Building, Pittsburgh 22, Pa.

The control is designed to permit instant starts and stops, unlimited reversibility, and variable speeds. They are made to operate safely and dependably in explosive, damp, hot or corrosive atmospheres.

Joy Pistonair motor horsepower ratings range from 11½ to 20 at 90 psi. Direct drive models turn 400 to 800 rpm. at rated hp., with stall torques from 225 to 162 ft. lbs. Geared drive foot mounted models have a choice of 5 gear-reduction ratios of 4:1 to 21:1. Output shaft rpm. is at rated ranges of 19 to 200 with stall torques of 4837 to 648 ft. lbs.

Falcon Distress Flares Now In Kits

Distress Flares kits by the Falcon Alarm Co., Inc., 243 Broad St., Summit, N. J., when ignited, cast a bright red, steady light that may be seen for miles.

Falcon Marine Distress Flares are packaged in cardboard boxes sealed in waterproof plastic. Each box contains 3 five-minute red flares with handles, each flare individually sealed in a plastic bag. The flares will float and are kept dry even after a boat has capsized.

The flares are ignited by a friction device that is an integral part of the flare. The materials in the flares have been selected and combined to preclude chance of explosion or spontaneous heating. Falcon flares are claimed to be non-extinguishable by wind, spray, or rain and they burn without obscuring smoke. Instructions are included with every box and each flare.

Jabsco Self-priming Pumps

Jabsco Pump Co., 1485 Dale Way, Costa Mesa, Cal. is offering an extensive line of Neoprene impeller self-priming pumps. The battery operated Water Puppy pump is made for 6, 12, 24, and 32 volt systems. The Water Mule ½" series and the Water Buralo 1" series are available powered by either electric motors or gasoline engines.

Jabsco also features bronze pumps with ports from ⅛ to 1¼" in diameter, with plain or ball bearings, plus its regular line of flange mounted, high speed marine engine cooling pumps, and pump and clutch units.

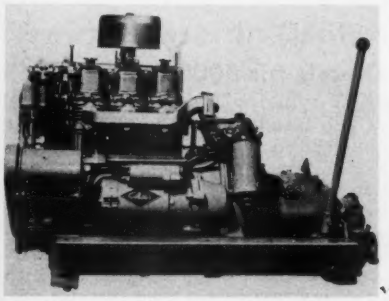
Jabsco pumps may be used for many marine purposes including cooling, bilge pumping, wash downs, push button water systems, and for feeding a constant stream of water to bait tanks.

New Petter Air-Cooled Diesels

The Petter Engine Division of Orenda Industrial Inc., 34-14 58th St., Woodside, N. Y. is marketing its new PC range of air cooled, light weight, high speed marine engines. The 4-cylinder PC4M model with a net weight of 511 pounds is designed to run one hour on a gallon of Diesel fuel. Compact of design, the PCM engines come in 1 to 4 cylinder sizes with continuous power up to 20 bhp. at 3000 rpm.

Petter's air cooled PH1RMR develops 7½ bhp. at 1800 rpm. with a 2:1 reduction gear. In addition to these air cooled engines Petter offers the PC3, a 3-cylinder version of the PC engines for powering pumps and generators.

Petter products include a 1500-watt and a 6500-watt generator set powered by their PAZ1 and AV2 engines respectively and using a Winpower 32-volt battery charging generator. Petter also has a water cooled AV2RMR twin cylinder marine propulsion engine fitted with reverse and 2:1 reduction gear. The engine produces 12 bhp. at 1800 rpm.



Petter PC3RMR 15hp. at 3000 rpm. air-cooled Diesel.

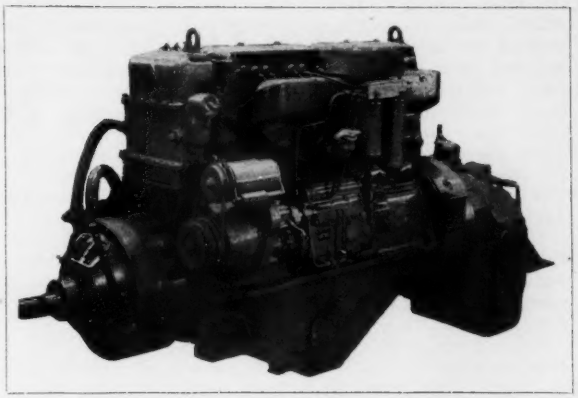
New Munston Radio Telephone

Munston Manufacturing Co., Inc., Beech Street, Islip, Long Island, N. Y. has presented the Nassau, first in a new line of marine radio eqiupment for commercial craft. Electronically, the Nassau model MRT-30B provides 5 channels, 30 watts to the final amplifier, a transmitter tuning system which meets the latest FCC requirements, Push-Pull modulation, transmitter filament stand-by switch, and built-in modulation limiter and filter for voice readability and power.

The receiver provides 5 channels plus broadcast band reception, amplified automatic gain control circuit, to level out the overly strong signals and increasing weak signals.

Federal Fire Retardant Paint

The Federal Paint Company, Inc., 33 Rector St. New York, N. Y. has developed Federal Fire Retardant Yacht Paint which is designed to resist fire by releasing fire-smothering gases when exposed to flame or intense heat. This is the same fire-fighting paint formula proven and used in naval operation to protect ships and men.



The new Allis-Chalmers Model 16000 marine Diesel.

Allis-Chalmers Introduces New Diesels

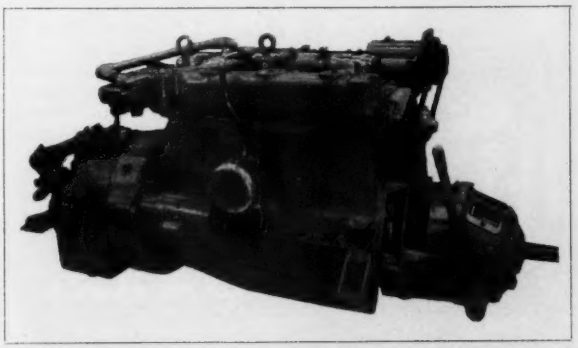
Two new heavy-duty marine Diesel engines have been added by Allis-Chalmers Mfg. Co., Milwaukee, Wis. One engine, the 21000, is turbocharged and develops 340 hp. at 2000 rpm. The other is the 16000 naturally aspirated engine developing 230 hp. maximum at 2000 rpm., and 170 shaft hp. at 1800 rpm. for heavy duty service. Both are 6-cylinder, 4 cycle, in-line engines with 5-¼" bore, 6-½" stroke, 844 cu. in. displacement and 14.5 to 1 compression ratio.

With the exception of the turbocharger and its related parts used on the 21000, all engine components are interchangeable. Basic weight of the engines is about 3000 lbs. This gives a weight-to-horsepower ratio of approximately 9 to 1.

Development of the engines has been carried on over a period of more than five years, during which time extensive field tests were conducted.

A feature of the new engines is a new "two stage controlled turbulence" combustion. The initial "swirl" turbulence is produced on the intake stroke when inrushing air is directed by positively located masks on twin intake valves. Second stage turbulence, or "squish", builds up as pistons near the top of the compression stroke. The combustion chamber is a cavity in the piston head surrounded by a broad flat shoulder, above which air is trapped and squeezed towards the center and given a rotating motion. This is "squish". At this instance of peak turbulence, a multi-jet fog of Diesel fuel is injected at high pressure downward into the vortex of super-hot swirling rotating air burning the fuel completely. All this adds up to quick, easy starting, even in cold weather, fast acceleration, a clear exhaust throughout the speed and power range, and especially low consumption over a wide range of loads and speeds.

Simplicity, ruggedness and ease of servicing are some of the structural design features of the new engines. The block has internal ribbing to carry stud tension through



D-273 Allis-Chalmers Diesel with front power take-off.

its entire depth. Cylinder head studs are threaded into holes, counterbored approximately ½-inch below the face of the block to lower stresses from the studs below the top deck that help eliminate distortion. There is a fully counter-balanced crankshaft with vibration dampener. Aluminum steel-backed precision bearings with high heat conductivity and load carrying ability are used. Five-ring aluminum pistons are used with a Ni-Resist insert cast into the piston. The cast iron cylinder sleeves have a flame guard at the top, which guards against compression and water leaks.

Both the 21000 and 16000 have full pressure lubrication. The injection pump is base mounted with an integral variable-speed governor. A gear-type transfer pump is used, as is a two-stage fuel filter and full-flow lubricating oil filters.

Several improvements have been made in the Allis-Chalmers D-273 Diesel, which is rated 85 hp. at 2800 rpm. A new 31 hp., Twin Disc front power take-off now is available, and the engine can be obtained with in-line or drop-down reverse-reduction gears up to 4:1 ratio.

A new simplified fuel injection system, with better accessibility, is used on the D-273. Fuel and lube oil filters are standard equipment, and the cast water-cooled exhaust manifold has been retained. For easier oil change, a hand pump is mounted on the oil pan.

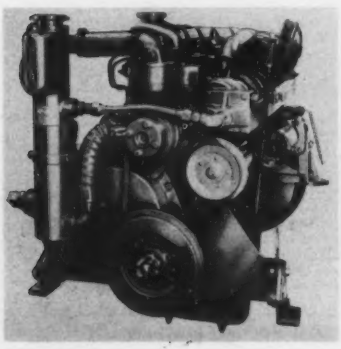
Greene Is Fitler General Sales Manager

The Edwin H. Fitler Co., Philadelphia 24, Pa., has announced the appointment of J. J. Greene as general Sales Manager. Greene was with the Columbian Rope Co. from 1941 to December 1957, serving in the sales division. He transferred to Fitler to assist George S. Prechtel, who had returned from a serious illness. Prechtel, at his own request, was relieved of his responsibility as general sales manager in December 1958, to become a consultant for the Company.

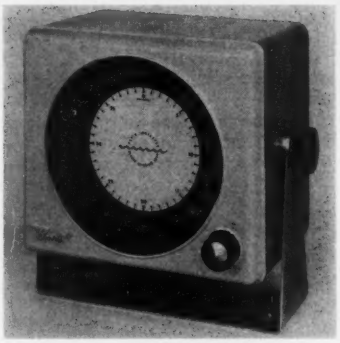
J. J. Greene.

Kaar Making Slim-line Telephone

The Kaar 249 is a slim-lined 20-watt, 5-channel radio telephone with broadcast band reception, and an all aluminum, splash-proof cabinet. The mounting plate and plug-in connections for antenna, ground, and power cables are for easy installation and quick removal for storage or servicing. Made by Kaar Engineering Corp., Palo Alto, Cal., there is top panel control for vertical installation against bulkhead. When mounted vertically the radio telephone requires only 5½" x 10" of space. The transistorized power supply uses minimum power and helps cut the weight to 15 pounds.



New Osco low silhouette 6DF Ford Marine Diesel made by Osco Motors Corp., 3627 N. Lawrence St., Philadelphia, Pa. The reduction of 3½" of overall engine height permits the side aspirated 100 hp. engine to be installed under decks and hatches that might otherwise have to be raised. Installation drawings are available.



New Bendix transistorized DI-5 depth indicator is graduated 0-40 fathoms.

New Depth Indicator From Bendix-Marine

Bendix-Marine, 8211 Lankershim Blvd., N. Hollywood, Cal. has announced an addition to their line of depth sounders. The new transistorized DI-5 fills the requirements for both deep and shallow water soundings, with graduations of 0 to 240 feet and 0 to 40 fathoms and a recessed, 5½" diameter dial, the wide spacing of the depth scale permits easy reading.

Accuracy is claimed to one foot variation. A feature, which has also characterized previous Bendix indicators, is the Brite-Lite neon bulb flasher designed for making readings in full sunlight.

Made for 12 or 32-volt system, the battery drain is 30 watts. Two basic types of transducers are available; an integral one-piece stuffing tube and transducer, or a separate transducer and through hull fitting to permit location in optimum performance areas. The unit may be bulkhead, overhead, or flat surface mounted, and the indicator adjusted to any angle.

New Hercules Diesels for 3000 RPM

Two new high-speed 6-cylinder Diesel engines designed for applications in which speeds of 1800 to 3000 rpm are desired have been introduced by Hercules Motors Corporation, 101 11th St. S. E., Canton 2, Ohio. The new DDH engines are offered in two sizes with 298 and 339 cubic inches displacement. The former provides up to 112 hp at 3000 rpm and the latter 122 hp at 3000 rpm.

The engines were developed for marine use, particularly equipment using hydraulic torque converters which call for engine speed of approximately 2200 rpm for efficient operation. They are useful where a premium is placed on less engine weight per unit of horsepower and higher output for the same size engine.

Principle new design features distinguishing the new engines from Hercules' regular DD Diesel line are increased crankpin diameter and larger main bearing.

Industrial Plastics Buoyant Apparatus

A new, lightweight buoyant apparatus has been developed by the Portland Industrial Plastics Company, 6536 S.W. Macadam Ave., Portland, Ore. The apparatus meets the Coast Guard regulations as a safety device, with its light weight, handling ease, construction, and compactness.

It is made of lightweight Styrofoam covered with color impregnated Fiberglas reinforced plastic and is available in 7-man, 11-man, and 16-man capacities. The 7-man unit measures 2'9" x 2'9" x 8" weighs 35 pounds and supports 320 pounds. The 11-man unit, weighing 50 pounds and measuring 3' x 4' x 8" can support 463 pounds while the 65 pound 16-man unit supports 683 pounds on measurements of 4' x 4' x 9".

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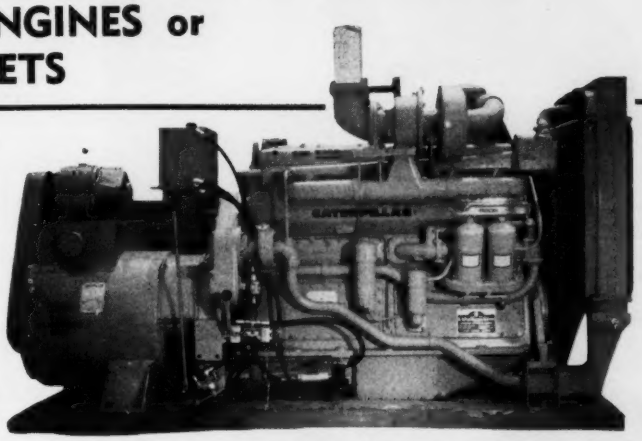

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Trawling Gear In California

(Continued from page 10)

heard seldom now. The after end of the net, usually of very small mesh and little or no taper, was called the cod end, a term still current. This was sometimes laced with a rope that could be withdrawn easily when the net was to be emptied, or the after edge was closed by a draw rope or cod line threaded through small purse rings, so that the pulling of the rope opened the end of the bag. For this reason the cod end is often called the purse. Both lacing and pursing persist in modern California trawl. Beam trawling usually employs only one towing rope.

Much of modern trawler practice originated with beam trawling which continued from many years in Europe until the beam was displaced by otter boards. In California however, the double drag, two-boat trawl, or paranzella preceded the otter trawl and the beam trawl found little use.

This method of trawling, originally conducted with sailing vessels, has one decided advantage over the beam trawl in that the heavy rope towlines, in diverging from the net, scraped the bottom for a few fathoms of their length, stirring up the fish. The wing spread of a paranzella net was not only wider than a beam, but the spreading warps tended to increase the fishing swath, thus partially serving the purpose of what later was called the ground cable.

The paranzella was introduced in America at San Francisco in 1876, and soon spread to other California ports. Although it was not adopted elsewhere in the country, two boat dragging was the standard there for about 50 years. It was the only method used until 1919 when the otter boards met with a little success, but paranzella, two-boat sets were seen commonly even as late as 1947. The net in general was of complex construction, heavy webbing and small mesh, being operated for sole and flounders intended for sale at San Francisco.

The invention of the otter board has been credited to

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English sport fishermen, the boards being used in England by sportsmen and commercial fishermen possibly as early as 1860. Danish fishermen, in the late eighties, used otter boards in their plaice seines and a patent was issued in England in 1894 for an improved board with bars instead of chain bridles.

The use of the otter board on each wing of a trawl net gradually spread throughout the world displacing the beam trawl. The diverging boards opened the mouth of the net wider than could possibly be accomplished by a beam, while freeing the head rope from its lashing to the rigid spar. This allowed it to rise higher than the few feet permitted by the beam's trawler heads, thus increasing the catch by including some of the fishes that rose from the bottom when disturbed by the approaching ground rope.

California fishermen were not impressed by the otter trawl and none was used consistently in that state for 15 years after its introduction on the Atlantic Coast. European and New England steam trawlers were expensive vessels compared with the small paranzella tugs, even with two required. Also, the early otter trawl nets fished a narrower swath than did the paranzella with its flaring warps.

By 1930 otter trawls were used extensively in Puget Sound, and in British Columbia they were well established. These were about fifty feet long, the same size as the paranzella nets still in use. The otter boards were about five feet long 3½ feet wide and of three-inch iron shod plank. The distinctive feature was a connecting cable or ground cable 30 to 100 feet long connecting the board to the wing of the net allowing a wider spread of the boards.

Changes in Otter Trawls

Even with that improvement, the fishermen claimed that the paranzella caught more fish, but they admitted that the cost per pound was less with the otter trawl. During the transitional period some boats tried otter boards on the wings of a paranzella net so that one boat did the dragging.

In the early otter trawl, the board was attached directly to the wing of the net. The end of the head rope was made fast to the upper aft corner of the board and the foot rope was attached to the corresponding lower corner of the board. Two Frenchmen, Vigneron and Dahl, invented a trawl for hake fishing in which the net wing was made fast to a short pole, stake, spreader, or more properly a brail. The head rope was attached to the upper end of the spreader and the foot rope to the lower end. Short bridles connected the spreader to a ground cable 10 to 30 fathoms long, and the other board was at the forward end of the cable.

A long bridle, up to 100 fathoms long, from the board was shackled to the opposite boards bridle and in this way only one towing warp was necessary. The ground cable served to stir up fish and increased the fishing swath. The spreader usually a 4 by 4-inch stake about 3½ feet long and was later called dhanleno or DanLeno.

The attaching of the head rope to the spreader instead of to the otter board did not permit the net to fish much higher than was true of the early form of otter trawl. The diverging pull of the two boards in either type of net placed a horizontal strain upon the net which was largely borne by the head rope, consequently it did not arch up over the mouth of the net no matter how much buoyancy it was given by adding floats.

The V-D trawl had been in use about 12 years when in the thirties some New England experiments with scale models of the V-D operated in clear water showed that the head rope was held down by the horizontal strain on the net and it tended to straighten between the spreaders. This led to the invention of a device for removing the strain upon the head rope and the result has been called the New England trawl. The spreader was discarded, the net wing was built higher and short bridles to the ground cable were replaced by long bridles called leaders. From the after end of each ground cable one leader was attached to the lower corner of a wing and the foot rope. Another leader was attached to the head rope and upper

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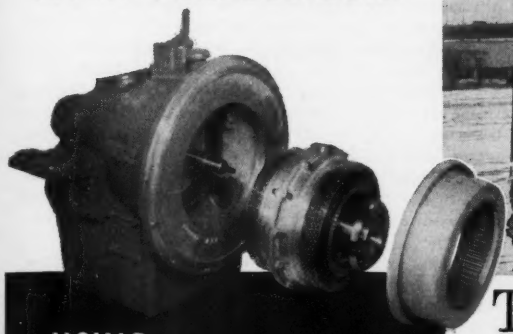

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corner of the net wing. This permitted the head rope to respond more readily to the water pressure inside net, and resulted in an upward arching of the head ropes and increased fishing height.

The next step in the same direction was the construction of the balloon trawl, a light net that was built to clear the bottom instead of digging in. In earlier days, the scraping along the bottom was considered necessary to catch flatfishes, but the balloon net was made so that it would bite as little as possible and only the boards would be in contact with the bottom.

The foot rope was not weighted and the webbing was light and the mesh uniform through out. The simple construction had an increased overhang and the mouth opening was built about twice as high as in otter trawls. The head rope ballooned as high as 20 or 25 feet in contrast to the ordinary V-D trawls.

The arching of the head rope was accomplished primarily by the use of two leaders from each wing to each otter board. The leaders, 16 to 20 fathoms long, were the same length and called leaders, tow lines, and bridles. The use of double leaders accomplishes the same result as in N E trawl in which two leaders from a wing are attached to the end of a ground cable from the board instead of being attached directly to the board itself. Two warps are used, one to each board.

Another west coast device went even further to elevate the head rope, and also make it possible to remove the floats on the head rope so that the net could fish at greater depths where the water pressure would crush ordinary metal or glass balls. The device has no official name but it has been called kiska after one of the first vessels to use it.

The ground cable from the otter board to the net wing is attached only to the lower corner of the net and the foot rope. At the same time, the head rope is not connected with the otter board, but is attached to the towing warp about 50 fathoms in advance of the board by a light line spliced into the warp. The net wings are built unusually high.

Because the head rope is attached so far forward to the upsweep of the towing warp, the head rope is able to arch upward to a fishing height of 36 feet, in decided contrast to the 4-foot height of the old beam trawl.

Variations such as the V-D, N E, balloon and kiska and minor variations occur constantly. So much so that it is difficult to find two nets alike, but the differences do not involve the basic plan of operating the net. Changes may include techniques and types of accessory gear and its uses. Most of the Italian otter board nets have restrained paranzella characteristics, chief of which are heavy twine, complex hanging, small mesh, and wings terminating in spreaders instead of leaders.

The box type trawl from the Atlantic Coast was introduced in California around 1935. Modifications in the net were made and at present the net is called a western or Pacific trawl. This type is made up of four pieces, a top, bottom and two sides, to which wings and a sack or tunnel consisting of intermediate piece and cod end. The four body pieces are joined along four seams and reinforced by a rope rib line, resulting in a box.

The chief characteristic of the eastern type trawl is that the body and wings are made in upper and lower halves and are joined along the horizontal lateral seam. This is supposed to allow the net to widen or belly out into a better fishing position than the box net. The normal eastern net has more overhang than the western model.

Trawling gear is by no mean stabilized as shown by its history. In Europe and America its story has been one of change, slowly at first but in later years at an accelerated pace. Trawl fishermen have not been bound by precedent, and therefore invention and development of gear is encouraged. The desire for better catches and preservation of the fishery are the incentives for bigger, better and more efficient trawls.

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Lamprey Losing Great Lakes Battle

(Continued from page 12)

required degree of purity, and it was expensive. Applegate turned to the chemical industry for aid.

Writing to several organizations who had contributed chemicals, he found a number who had a more than casual interest in the lamprey problem. Dr. Clarence L. Moyle of the Dow Chemical Company's Biochemical Research Laboratory was briefed on the problem.

The background of the compound indicated that other chemicals in the same family might be effective and easier to work with. Moyle suggested about nine compounds for further screening at Hammond Bay. During the tests one of these chemicals came through as the most promising yet. It demonstrated good activity, showed broad latitude allowing a good margin of safety in application, and posed fewer production problems. However, the chemical was relatively insoluble, had never been produced outside a laboratory, and was expensive.

Work continued at Dow, while at Hammond Bay, a new testing program was begun in raceways which simulated actual stream conditions. By Fall of 1957, Dow was able to supply a formulation in a 30 percent concentration, within the limits of efficient application requirements. Meanwhile the Hammond Bay tests showed such promise that there was pressure applied for an actual stream test. Thus, the Midland, Mich. company's new Dowlap was readied for practical application.

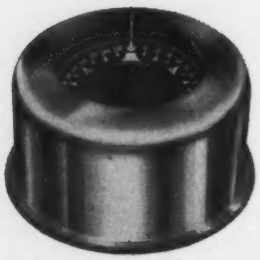
A stream, Little Billie's Creek near Cheboygan, Michigan, was picked and the date was set for October, 1957. About 1,200 lamprey larvae were confined in cages along the stream. These were the control specimens. Their reactions were recorded hourly for a twenty-four hour period. Four hours after the chemical was metered into the stream, observers at the first station down-stream saw a few larvae come out of the mud.

By dawn, lamprey larvae native to the stream began to pile up along the banks. At the end of the 24 hour period, ninety two percent of the control larvae were dead and others were dying. Applegate pronounced the test a success.

The work did not stop there however. Research into problems of formulation and application continued throughout the winter and, in April 1958, a second stream test was made on Carp Creek near the Hammond Bay station. The purpose of the test was to perfect methods of field analysis to assure control in application. The results of the second test were also recorded and showed that the rate of kill was much faster and at a lower concentration. This pointed to a difference in the water chemistry, opening a new approach to more effective use of the larvicides.

Further tests were made in the Silver, Rock, and Chocolay Rivers. It is hoped that all the streams in the Lake Superior watershed will be treated in the next eighteen months and the entire Great Lakes area in five years.

Cruise-Master



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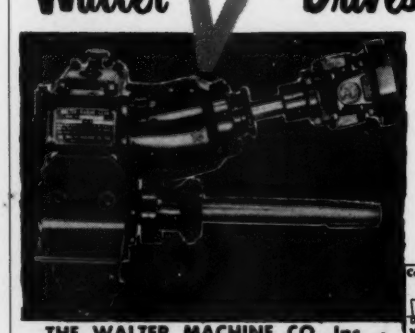

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Comber (2)	33,100	Pauline H. (2)	55,100
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		Porpoise (3)	43,200
Eugene H. (3)	38,900		
		Richard Lance (3)	42,000
Falcon (1)	13,100	Rita (3)	28,500
Friendship (2)	27,900	Roberta Anne (3)	39,300
		Robert Joseph (4)	76,800
Gannet (2)	43,100	Rosalie F. (2)	47,300
Growler (3)	48,700	Rosemarie V. (1)	14,000
		Rush (3)	31,500
Harmony (1)	15,700	Russell S. (1)	8,000
Hope II (4)	29,400		
		Shannon (3)	53,700
Invader (2)	44,500	Sharon Louise (3)	60,000
		Smilyn (3)	51,600
Jacintha (1)	21,500	Solveig J. (2)	58,000
Janet & Jean (3)	79,800	Stanley B. Butler (2)	57,500
John G. Murley (2)	41,700	Sunbeam (4)	44,000
Julia DaCruz (2)	28,800		
		Theresa & Jean (2)	54,500
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Babe Sears (2)	13,500	Malene & Marie (1)	7,700
Baltic (2)	16,200	Mary Ann (2)	20,300
Barbara & Gail (2)	21,300	Mary J. Hayes (1)	11,000
B. Estelle Burke (2)	17,200	Moonlight (1)	12,500
Brant (2)	12,900		
Bright Star (2)	17,000	New Bedford (1)	11,000
		Newfoundland (1)	7,200
Camden (2)	16,700	Noreen (2)	16,500
Catherine B. (1)	3,400		
Catherine C. (2)	12,500	Pearl Harbor (1)	11,200
Charles S. Ashley (1)	6,200	Pelican (1)	12,200
Clipper (2)	21,500	Polaris (2)	18,000
Dartmouth (2)	27,000	Ruth Lea (2)	22,200
Debbie Jo-Ann (1)	11,200	Ruth-Moses (2)	16,500
Edgartown (2)	25,700	Sandra Jane (2)	22,000
Eleanor & Elsie (2)	13,500	Sea Ranger (2)	12,000
		Sippican (2)	24,000
Fairhaven (1)	11,000	Snoopy (2)	18,200
Flamingo (2)	18,500	Stanley M. Fisher (2)	22,000
Fleetwing (2)	17,200	Stephen R. (2)	10,500
Florence B. (2)	18,500		
		Ursula M. Norton (2)	18,500
Geraldine (2)	21,400		
		Vivian Fay (2)	18,000
Hilda Garston (2)	26,300		
		Wamsutta (1)	8,600
Josephine & Mary (1)	3,500	Whaling City (2)	3,600

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Agnes & Elizabeth (2)	25,000	Oceanlife (1)	308,000
Alice M. Doughty II (4)	67,000	Quincy (1)	203,000
Andarte (3)	130,000	St. George (2)	395,000
Challenger (1)	700	St. Rosalie (1)	39,000
Courier (3)	125,000	Theresa R. (1)	97,000
Dorothy & Ethel II (1)	12,000	Vagabond (3)	40,000
Elinor & Jean (3)	37,700	Vandal (3)	89,600
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		Natale III (2)	41,000
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Curlew (2)	330,000		
		Philip & Grace (1)	82,000
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		Regina Maria (1)	65,000
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Estrela (1)	150,000	Rosie & Gracie (5)	29,000
Eva II (5)	7,500		
		St. Anna Maria (1)	1,500
Flow (1)	220,000	St. Cabrini (5)	38,000
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		St. Joseph (3)	60,000
Giacoma (5)	5,500	St. Mary (8)	52,000
Golden Dawn (2)	21,000	St. Nicholas (1)	127,000
		St. Peter (4)	73,000
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Irma Virginia (3)	2,500	Sebastiana C. (4)	72,000
		Serafina N. (4)	24,000
J.B.N. (1)	8,000	Serafina II (3)	47,000
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Judith Lee Rose (1)	310,000	Tipsy Parson (6)	6,000
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Carole Ann (4)	21,500	Phyllis J. (1)	1,000
Curlew (5)	27,700	Roann (2)	13,000
Dauntless (1)	8,400	Sharon Louise (1)	2,800
Falcon (1)	1,000	Southern Cross (3)	15,800
Famiglia (3)	8,100	Three Bells (3)	19,100
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Averio (1)	900	Lt. Thos. Minor (8)	14,400
Bette Ann (9)	7,900	Marise (11)	6,400
Carl J. (12)	14,000	Mary & Gloria (3)	1,400
Carolyn & Gary (6)	3,400	Old Mystic (9)	17,100
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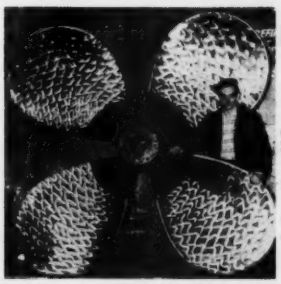

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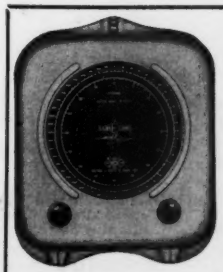

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Sesco, Inc., 47 Nichols Ave., Friday Harbor, Wash.

RADIO TELEPHONES
Applied Electronics Co., Inc., 213 E. Grand Ave., South San Francisco, Calif.
Bludworth Marine, 92 Gold St., New York 38, N. Y.
Radiomarine Products, a Division of RCA, 75 Varick St., New York 13, N. Y.

RANGES—Galley
"Shipmate"—Shipmate Stove Division, Souderton, Pa.
"Shipmate" and "Webbperfection" — Elisha Webb & Son Co., 136 S. Front St., Philadelphia 6, Pa.
Harry C. Weiskittel Co., Inc., 4901 Pulaski Highway, Baltimore 24, Md.

REDUCTION GEARS
Auto Engine Works, Inc., 333 (A) North Hamline Ave., St. Paul 4, Minn.
Snow-Nabstedt Gear Corp., Welton St., Hamden, Conn.
Twin Disc Clutch Co., 1341 Racine St., Racine, Wis.
The Walter Machine Co., Inc., 84 Cambridge Ave., Jersey City 7, N. J.

RUST PREVENTIVES
Sudbury Laboratory, South Sudbury, Mass.

SEARCHLIGHTS
The Carlisle & Finch Co., 4562 W. Mitchell Ave., Cincinnati 32, Ohio

SHIPBUILDERS
Blount Marine Corp., Warren, Rhode Island.
Diesel Engine Sales Inc., St. Augustine, Fla.
Diesel Engine Sales of Ft. Myers, Fla., Inc., 2909 Frierson, Ft. Myers, Fla.
Harvey F. Gamage, So. Bristol, Maine.
General Marine Boatyard, Inc., Fort Myers Beach, Fla.
Gladding-Hearn Shipbuilding Corp., 1 Riverside Ave., Somerset, Mass.
Morehead City Shipbuilding Corp., Morehead City, N. C.

SILENCERS
The Maxim Silencer Co., 126 Homestead Ave., Hartford, Conn.

STARTING FLUID
Spray Products Corp., P. O. Box 844, Camden 1, N. J.

STEERING GEAR
Metal Marine Pilot, 342 Golden Gate Ave., Tacoma, Wash.

STERN BEARINGS
Byron Jackson Tools, Inc. 1900 E. 65th St., Los Angeles 1, Calif.
"Goodrich Cutless": Lucian Q. Moffitt, Inc., Akron 8, Ohio.

TRAWL CABLE METERS
Olympic Instrument Laboratories, Vashon, Wash.

TWINE
Brownell & Co., Inc., Moodus, Conn.
Columbian Rope Co., Auburn, N. Y.
Ross-Matthews Corp., Box 1110, Fall River, Mass.

V-BELTS
Flexible Steel Lacing Co., 4683 Lexington St., Chicago 44, Ill.

VOLTAGE REGULATORS
Safety Industries, Inc., Box 904, New Haven 4, Conn.

WINCHES
Hancock Marine, 1567 No. Main St., Fall River, Mass.
Hathaway Machinery Co., Inc., New Bedford, Mass.
Stroudsburg Engine Works, 62 North 3rd St., Stroudsburg, Penn.

WIRE ROPE
American Steel & Wire Division, United States Steel, Rockefeller Bldg., 614 Superior Ave., Cleveland 13, Ohio.
Hackensack Cable Corp., 110 Orchard St., Hackensack, N. J.
John A. Roebling's Sons Co., Trenton 2, N. J.
Wickwire Spencer Steel Division of The Colorado Fuel & Iron Corp., Palmer, Mass.

FOREIGN BAILINGS

PANAMA TERRITORIAL WATERS have been extended to 12 miles. The U. S. Department of State was informed recently that the President of Panama signed a law purporting the extension of Panama's territorial sea.

It is the view of the U. S. Government that no basis exists in the international law for claims to a territorial sea in excess of 3 miles from the baseline which is normally the low water mark on the coast. Furthermore, in the U. S. view there is no obligation on the part of the states adhering to the 3-mile rule to recognize claims on the part of other states to a greater breadth of territorial sea.

In so far as the Panama Canal is concerned, it is clear from the 1903 Treaty that rights of the U. S. thereunder can not be affected by changes in the Laws of the Republic of Panama.

Panama's action would appear to be at variance with the understanding reached in the U. N., when the General Assembly adopted a resolution calling for a second Law of The Sea Conference in 1960. Panama was one of the nations supporting the measure.

SUBMARINE FOR FISHERY research is used by Russia. A converted Russian submarine was scheduled to make a trip recently, to make a scientific investigation of fish and the depths of the sea.

Pravda, a Russian newspaper, quoted the head of the Soviet Fish Research Institute as saying, that the world's first oceanographic submarine would be equipped with giant searchlights, television cameras and equipment for taking and testing samples of the sea bottom.

RECORD HERRING CATCH is set by British Columbia in 1958. By December 17, when the herring fleet tied up for the balance of the year, close to 150,000 tons had been taken, an all time record. Herring catches from 1954-57 averaged 52,000 tons.

The Fisheries Association of British Columbia attributed the record catch to good spawning and ocean conditions, as well as wise management and conservation policies.

Most of the herring catch was taken in the inlets on the West Coast of Vancouver Island and then sent to reduction plants, where it is converted into fish meal and oil.

CHILE ISSUES ANTIBIOTIC regulations on use in ice for fish refrigeration. The Chilean Ministry of Health recently approved a regulation dealing with the addition of antibiotics to ice used for refrigerating fish, by which each antibiotic as well as the procedure of incorporating it in ice will be authorized by the National Health Service.

Distributors of antibiotics so used, ice-making plants, fishery plants, fish transportation vehicles, and types and materials of containers used in marketing, must be authorized by the same service.

Containers of the fish product so treated must comply with the September 26, 1939 food regulations and must indicate the name of antibiotic, date of application to ice, and length of duration of activity, with the statement "treated with ice containing antibiotics to retard alteration." Infractions of the regulations will be sanctioned according to the Sanitary Code.

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For The Finest Shrimp-Trawls—Any Type

WESTERN TRAWL & SUPPLY COMPANY

HOME OF "WESTERN JIB" TRAWLS (U.S. PAT. 2,816,386)

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BOAT & GEAR MART

Classified Advertising Rates: $1.00 per line, $5.00 minimum charge. Count 9 words to a line. Closing date, 25th. National Fisherman, Goffstown, N. H.

FOR SALE

Cruisers, draggers, auxiliaries—all types and sizes. If you are in the market for anything in that line, please write us—no inquiry too small to merit attention. KNOX MARINE EXCHANGE, INC., CAMDEN, MAINE.

BOATS AND SHIPS FOR SALE AND CHARTER

Purse seiners, draggers, trollers, freezer vessels, tugs, barges, water taxis, cargo ships, tankers, passenger ships, dredges, yachts, surplus type vessels and used marine equipment. World-wide contacts. JERRY'S BOAT SALES, 310 West 7th St., San Pedro, Calif.

GOVERNMENT SURPLUS EQUIPMENT LIST

Buy surplus direct from Government at tremendous savings. Boats, motors, gear, machinery, power tools, truck jeep, hundreds others. List $1.00. Surplus Bulletin, Box 169NAE, East Hartford 8, Conn.

FOR SALE

World War II subchaser *Lynn II* 110' x 19' x 7' twin screw Burmeister & Wain 180 HP engines practically new. Fully equipped with radio telephone, direction finder, radar. Two large holds, one refrigerated. Hull and all equipment excellent condition. Formerly dragger and scalloper converted to cargo. Easily reconverted to fishing. Selling due insuficient cargo work. Perry B. Duryea & Son, Inc., Montauk, L. I., N. Y. MO8-2410.

DRAGGER "JACK" FOR SALE

39' x 12' x 3'6", 4 cylinder Gray Diesel, 2-1 reduction. Boat and equipment in First Class condition, now in full operation. Call SE 3-6551 or write to D'Intino Bros. Fishery, Sea Isle City, N. J.

FOR SALE

Lobster boat and dragger, 40' x 11'4" built 1954. 212 horsepower V-8, 2:1 reduction. Monel shaft, Fathometer, winch, 2 sets scallop dredges. Price $5,000.00. Box 62, National Fisherman, Goffstown, N. H.

BOATS FOR SALE

Commercial Fishing Craft: eastern or western: wood or steel, all sizes & prices. Active market for good used marine equipment. "The Right Boat to Suit Your Requirements." New England Shore Front Real Estate, Industrial-Residential. EDWIN B. ATHEARN, Marine Broker, Tel. Kimball 8-1447, 197 Palmer Ave., Falmouth, Mass.

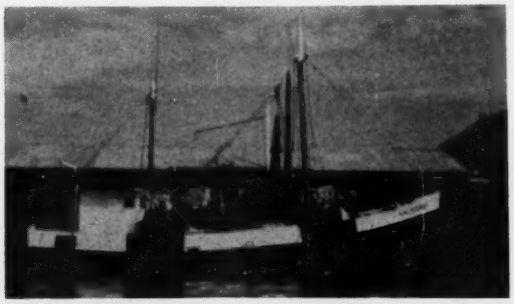
DRAGGER FOR SALE

52 x 16 x 6, 6-71 GM., 3:1 reduction, fuel capacity 1100 gals. Nylon gear, auxiliary pump and generating plant. Boat, motor and equipment in excellent condition. Stanley Buys, 61 Brook St., West Sayville, L. I., N. Y. Telephone Say. 4-0705J.

SLOOP FOR SALE

Sloop "Elissha Saxton", 32 ft. on keel, 36 overall, 14 ft. beam, 3½ ft. draft with center board up. 12 x 12 keel, 4 x 4 ribs. No engine, no sails. Boat is in water. Apply Fisherman Fish Market, 123 Stratford Ave., Bridgeport, Conn.

FOR SALE



Dragger "Vagabond", built 1948, 64' long x 17' beam x 10½' draft, ices 60,000 lbs. 265 hp. Hendy Diesel with pilot house controls, Hathaway deck gear, rigged both sides, Fathometer, 2 Lorans, radio. Ruggedly built, now fishing out of Atlantic City, N. J. Price $18,000. Harold B. Essington, 24 West Park Ave., Pleasantville, N. J. Phone 2133.

BOAT "DOLLY K." FOR SALE

New work boat, 60' x 18' x 5', good sea boat. Very sharp. Gray Diesel good as new suitable for trawl fishing or other fishing and freighting, with or without dredge rig. Telephone Hampton PA 3-8076. Willie King, 3310 Kecoughton Road, Hampton, Va.

FOR SALE

48' dragger, Virginia built, 6 yrs. old, two inch yellow pine plank, 671 Gray Marine Diesel, 3:1 reduction, 36 x 32 wheel, Hathaway winch, radio, Loran, Fathometer, $9,500. F. Solter, 16 Evergreen Ave., Huntington Sta., N. Y. Call HAmilton 3-4333.

FOR SALE: VINEYARD HAVEN, MASS.

Boat "Roann", 61' long, Caterpillar engine. Call Roy W. Campbell, Vineyard Haven, Mass. 1055.

WESTERBEKE FISHING GEAR CO., INC.

Grimsby Trawls
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Wire and Manila ropes

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Another reason you're miles ahead with Mobil!

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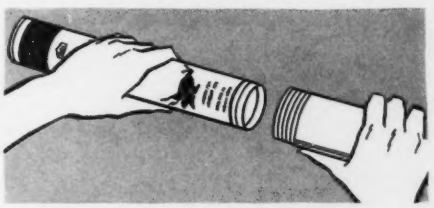
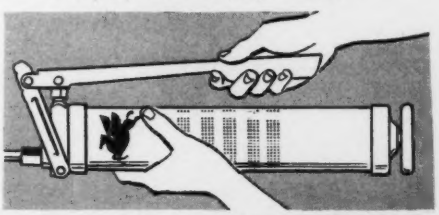


Simply slip Mobil cartridge into gun . . .



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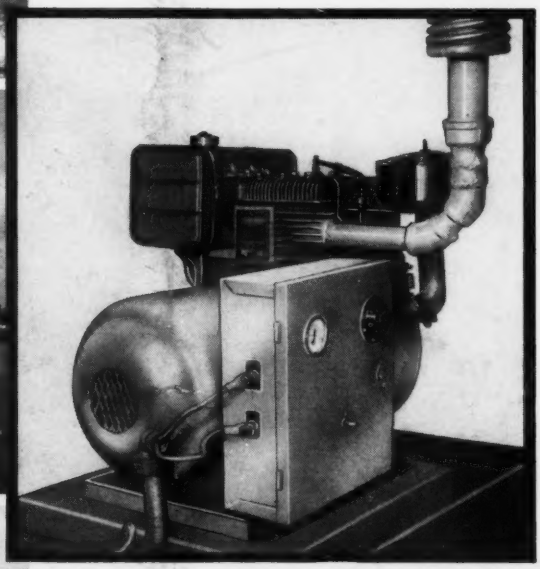
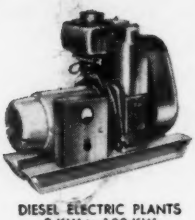
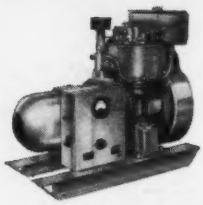


ACTUAL WINPOWER INSTALLATION

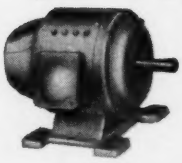
The photograph to the left shows an actual WINPOWER installation on the Jeanette, one of the latest shrimp trawlers built by Congeladora del Pacifico, Mazatlan, Mexico. Like hundreds of other commercial craft, the Jeanette depends on a WINPOWER Electric Plant for dependable, low-cost power and light afloat.



DIESEL ELECTRIC PLANTS
3 KW to 100 KW
Water-Cooled



GASOLINE ELECTRIC PLANTS
1000 Watt to 100 KW
Air or Water Cooled



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Shrimpers, trawlers, tugs, workboats of all kinds...there's a Winpower Plant of the size and type needed to furnish power for flood-lights, radio, bilge pumps, compressors. They cost less to own, less to operate. Each WINPOWER Plant is designed and built to provide years of trouble-free operation. Generators are direct-drive mounted, permanently aligned and engineered for maximum performance and dependability. You are not paying for costly features not essential for efficient operation. Wide range of engine sizes, gasoline or diesel. Write today for FREE illustrated folder.

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